

LACCASE MUTANTS**CROSS-REFERENCE TO RELATED APPLICATIONS**

This application is a 35 U.S.C. 371 national application of PCT/DK01/00292 filed April 30, 2001 and claims, under 35 U.S.C. 119, priority or the benefit of Danish application nos. PA 2000 00707 and PA 2001 00327 filed April 28, 2000 and February 28, 2001, respectively, and U.S. application nos. 60/203,345 and 60/277,817 filed May 10, 2000 and March 21, 2001, respectively, the contents of which are fully incorporated herein by reference.

**10 FIELD OF THE INVENTION**

The invention relates to laccase mutants with improved stability properties.

**BACKGROUND**

Laccase is a polyphenol oxidase (EC 1.10.3.2) which catalyses the oxidation of a variety of inorganic and aromatic compounds, particularly phenols, with the concomitant reduction of molecular oxygen to water.

Because laccases are able to catalyze the oxidation of a variety of inorganic and aromatic compounds, laccases have been suggested in many industrial applications such as lignin modification, paper strengthening, dye transfer inhibition in detergents, phenol polymerization, hair colouring, and waste water treatment. A major problem with the use of laccases is their poor stability against oxidative attack from e.g. radicals formed from the oxidation of mediators (also referred to as "enhancing agents").

Accordingly, it is the purpose of the present invention to create laccase variants with improved oxidative stability by using the information of a three-dimensional structure of a *Coprinus cinereus* laccase.

**SUMMARY OF THE INVENTION**

By analysing the three-dimensional structure of the *Coprinus* laccase structural parts or specific amino acid residues can be identified, which from structural or functional considerations appear to be important for the oxidative stability of a laccase. Furthermore, when comparing the three-dimensional structure of the *Coprinus* laccase structure with known amino acid sequences of various laccases, it has been found that several similarities exist between the sequences. The present invention is based on these findings.

Accordingly, as a first aspect the invention provides variants of a *Coprinus* laccase and of *Coprinus*-like laccases with improved oxidative stability as compared to the parent *Coprinus* laccase or *Coprinus*-like laccase.

In still further aspects the invention relates to DNA encoding such variants and to the  
5 use of the variants for various industrial purposes.

## DETAILED DESCRIPTION

### The *Coprinus*-like laccases

A number of laccases produced by different fungi are homologous on the amino acid  
10 level. For instance, when using the homology percent obtained from UWGCG program using the GAP program with the default parameters (penalties: gap weight=3.0, length weight=0.1; WISCONSIN PACKAGE Version 8.1-UNIX, August 1995, Genetics Computer Group, 575 Science Drive, Madison, Wisconsin, USA 53711) the following homology was found:

*Coprinus cinereus* laccase comprising the amino acid sequence shown in SEQ ID No. 1: 100%;

*Polyporus pinsitus* (I) laccase comprising the amino acid sequence shown in SEQ ID No. 2:  
74.4%;

*Polyporus pinsitus* (II) laccase comprising the amino acid sequence shown in SEQ ID No. 3:  
73.8%;

*Phlebia radiata* laccase comprising the amino acid sequence shown in SEQ ID No. 4: 69.9% ;

*Rhizoctonia solani* (I) laccase comprising the amino acid sequence shown in SEQ ID No. 5:  
64.8%;

*Rhizoctonia solani* (II) laccase comprising the amino acid sequence shown in SEQ ID No. 6:  
63.0%;

*Rhizoctonia solani* (III) laccase comprising the amino acid sequence shown in SEQ ID No. 7:  
25 61.0%;

*Rhizoctonia solani* (IV) laccase comprising the amino acid sequence shown in SEQ ID No. 8:  
59.7%;

*Scytalidium thermophilum* laccase comprising the amino acid sequence shown in SEQ ID No. 9:  
57.4%;

*Myceliophthora thermophila* laccase comprising the amino acid sequence shown in SEQ ID No.  
30 10: 56.5%.

Because of the homology found between the above-mentioned laccases, they are considered to belong to the same class of laccases, namely the class of "*Coprinus*-like laccases".

Accordingly, in the present context, the term "*Coprinus*-like laccase" is intended to indicate a laccase which, on the amino acid level, displays a homology of at least 50% and less than 100% to the *Coprinus cinereus* laccase SEQ ID NO. 1, or at least 55% and less than 100% to the *Coprinus cinereus* laccase SEQ ID NO. 1, or at least 60% and less than 100% to the *Coprinus cinereus* laccase SEQ ID NO. 1, or at least 65% and less than 100% to the *Coprinus cinereus* laccase SEQ ID NO. 1, or at least 70% and less than 100% to the *Coprinus cinereus* laccase SEQ ID NO. 1, or at least 75% and less than 100% to the *Coprinus cinereus* laccase SEQ ID NO. 1, or at least 80% and less than 100% to the *Coprinus cinereus* laccase SEQ ID NO. 1, or at least 85% and less than 100% to the *Coprinus cinereus* laccase SEQ ID NO. 1, or at least 90% and less than 100% to the *Coprinus cinereus* laccase SEQ ID NO. 1, or at least 95% and less than 100% to the *Coprinus cinereus* laccase SEQ ID NO. 1.

In the present context, "derived from" is intended not only to indicate a laccase produced or producible by a strain of the organism in question, but also a laccase encoded by a DNA sequence isolated from such strain and produced in a host organism containing said DNA sequence. Finally, the term is intended to indicate a laccase which is encoded by a DNA sequence of synthetic and/or cDNA origin and which has the identifying characteristics of the laccase in question.

#### The three-dimensional *Coprinus* laccase structure

The *Coprinus* laccase consists of the 539 amino acids derived from *Coprinus cinereus* laccase IFO 8371 as disclosed in SEQ ID No. 1.

The three-dimensional structure is believed to be representative for the structure of any *Coprinus*-like laccase.

The structure of the laccase was solved in accordance with the principle for X-ray crystallographic methods given in "X-Ray Structure Determination", Stout, G.K. and Jensen, L.H., John Wiley & Sons, inc. NY, 1989. The structural coordinates for the solved crystal structure of the laccase at 2.2 Å resolution using the isomorphous replacement method are given in a standard PDB format (Brookhaven Protein Data Base) in Appendix 1. It is to be understood that Appendix 1 forms part of the present application.

In Appendix 1 the amino acid residues of the enzyme are identified by three-letter amino acid code (capitalized letters).

The laccase structure is made up of three plastocyanin-like domains. These three domains all have a similar beta-barrel fold.

Three copper atoms were observed in the three-dimensional structure:

The so-called type 1 copper ion is coordinated by two histidines and one cysteine.

The so-called type 2 copper of the trinuclear centre is missing in the structure disclosed in the present application.

The so-called type 3 copper consists of two type 3 copper atoms (pair of copper atoms)  
5 bound to a total of 6 histidine ligands.

When comparing the amino acid sequence of the crystallized three-dimensional structure with *Coprinus cinereus* amino acid sequence of SEQ ID No. 1 the following four differences are observed:

18 amino acids are missing from the N-terminal of the crystallized protein;

10 17 amino acids are missing from the C-terminal of the crystallized protein;

Q19 in SEQ ID No. 1 is an A1 in the crystallized protein; and

Q243 in SEQ ID No. 1 is an E225 in the crystallized protein.

#### Generality of structure

Because of the homology between the *Coprinus* laccase and the various *Coprinus*-like laccases, the solved structure defined by the coordinates of Appendix 1 is believed to be representative for the structure of all *Coprinus*-like laccases. A model structure of *Coprinus*-like laccases may be built on the basis of the coordinates given in Appendix 1 adapted to the laccase in question by use of an alignment between the respective amino acid sequences.

The above identified structurally characteristic parts of the *Coprinus* laccase structure may be identified in other *Coprinus*-like laccases on the basis of a model (or solved) structure of the relevant *Coprinus*-like laccase or simply on the basis of an alignment between the amino acid sequence of the *Coprinus*-like laccase in question with that of the *Coprinus* laccase used herein for identifying the amino acid residues of the respective structural elements.

Furthermore, in connection with *Coprinus* laccase variants of the invention, which are defined by modification of specific amino acid residues of the parent *Coprinus* laccase, it will be understood that variants of *Coprinus*-like laccases modified in an equivalent position (as determined from the best possible amino acid sequence alignment between the respective sequences) are intended to be covered as well.

#### Methods of the invention for design of novel laccase variants

The laccase mutants of the present invention may be designed by constructing a variant of a parent *Coprinus* laccase, which variant has laccase activity and improved stability as compared to the parent laccase, which method comprises:



i) analysing the three-dimensional structure of the parent *Coprinus* laccase to identify at least one amino acid residue or at least one structural part of the *Coprinus* laccase structure, which amino acid residue or structural part is believed to be of relevance for altering the stability of the parent *Coprinus* laccase (as evaluated on the basis of structural or functional considerations),

ii) constructing a *Coprinus* laccase variant, which as compared to the parent *Coprinus* laccase, has been modified in the amino acid residue or structural part identified in i) so as to alter the stability, and, optionally,

iii) testing the resulting *Coprinus* laccase variant with respect to stability.

The laccase mutants of the invention may also be designed by constructing a variant of a parent *Coprinus*-like laccase, which variant has laccase activity and improved stability as compared to the parent laccase, which method comprises:

i) comparing the three-dimensional amino acid structure of the *Coprinus* laccase with an amino acid sequence of a *Coprinus*-like laccase,

ii) identifying a part of the *Coprinus*-like laccase amino acid sequence which is different from the *Coprinus* laccase amino acid sequence and which from structural or functional considerations is contemplated to be responsible for differences in the stability of the *Coprinus* and *Coprinus*-like laccase,

iii) modifying the part of the *Coprinus*-like laccase identified in ii) whereby a *Coprinus*-like laccase variant is obtained, which has an improved stability as compared to the parent *Coprinus*-like laccase, and optionally,

iv) testing the resulting *Coprinus*-like laccase variant with respect to stability.

The analysis or comparison performed in step i) of the methods of the invention may be performed by use of any suitable computer programme capable of analysing and/or comparing amino acid sequences.

The structural part which is identified in step i) of the methods of the invention may be composed of one amino acid residue. However, normally the structural part comprises more than one amino acid residue, typically constituting one of the above mentioned parts of the *Coprinus* structure such as one of the copper centres.

The laccase variants of the invention have improved oxidative stability compared to the un-modified parent laccases. Improved oxidative stability means that the laccase variants of the invention have improved tolerance towards oxidative chemical compounds, such as radicals formed from laccase mediated oxidation of radical precursor compounds. The radical precursor compounds may preferably be mediators or "enhancing agents", such as those described in EP

705327 (compounds containing N-OH, N-O and NR-OH groups), WO9501426 (compounds containing two aromatic rings etc.), WO 96/10079 (methylsyringate type of compounds) and/or WO 99/57360 (N-hydroxyacetanilide type of compounds).

According to the invention useful laccase variants may be obtained by:

- 5 - protection of the active site center by introduction of steric hindrance in the oxygen entry cleft;
- modification of oxidation labile amino acid residues in or near the substrate entry cleft;
- modification of oxidation labile surface exposed amino acid residues.

#### Modifications

10 The modification of an amino acid residue or structural part is typically accomplished by suitable modifications of a DNA sequence encoding the parent enzyme in question. The term "modified" as used in the methods according to the invention is intended to have the following meaning: When used in relation to an amino acid residue the term is intended to mean replacement of the amino acid residue in question with another amino acid residue. When used in relation to a structural part, the term is intended to mean: replacement of one or more amino acid residues of said structural part with other amino acid residues, or addition of one or more amino acid residues to said part, or deletion of one or more amino acid residues of said structural part.

20 The construction of the variant of interest is accomplished by cultivating a microorganism comprising a DNA sequence encoding the variant under conditions which are conducive for producing the variant, and optionally subsequently recovering the variant from the resulting culture broth. This is described in detail further below.

#### Variants with altered oxidative stability

25 It is contemplated that it is possible to improve the oxidative stability of a parent *Coprinus* laccase or a parent *Coprinus*-like laccase, wherein said variant is the result of a mutation, i.e. one or more amino acid residues having been deleted from, replaced or added to the parent laccase, the stability test performed as described below.

Preferred positions for mutations are the following:

| <u>CcL:</u> | <u>MtL:</u> |
|-------------|-------------|
| F21         | V52         |
| H91         | G121        |
| F112        | F141        |
| H133        | -           |

|      |      |
|------|------|
| H153 | Y177 |
| Y176 | H206 |
| H230 | M260 |
| H309 | P336 |
| F335 | T365 |
| Y347 | I380 |
| S349 | I382 |
| Y375 | V406 |
| Y416 | -    |
| F449 | -    |
| E455 | A506 |
| F456 | W507 |
| Y490 | W543 |

wherein

CcL: *Coprinus cinereus* laccase comprising the amino acid sequence shown in SEQ ID No. 1;

MtL: *Myceliophthora thermophila* laccase comprising the amino acid sequence shown in SEQ ID No. 10.

The above shown rows are homologous positions. The following variants are preferred:

A variant of a parent *Coprinus laccase*, which comprises one or more of the following substitutions in SEQ ID No. 1:

F21 A, I, L, N, R, S, Q;

H91 A, I, L, N, R, S, Q;

F112 A, V, L, I, P, F, M, G, S, T, C, Y, N, Q, D, E, K, R, H;

H133 A, I, L, N, R, S, Q;

H153 A, I, L, N, R, S, Q;

Y176 A, I, L, N, R, S, Q;

H230 A, I, L, N, R, S, Q;

15 H309 A, I, L, N, R, S, Q;

F335 A, I, L, N, R, S, Q;

Y347 A, V, L, I, P, F, M, G, S, T, C, Y, N, Q, D, E, K, R, H;

S349 A, V, L, I, P, F, M, G, S, T, C, Y, N, Q, D, E, K, R, H;

Y375 A, I, L, N, R, S, Q;

20 Y416 A, I, L, N, R, S, Q;

F449 A, V, L, I, P, F, M, G, S, T, C, Y, N, Q, D, E, K, R, H;

E455 A, V, L, I, P, F, M, G, S, T, C, Y, N, Q, D, E, K, R, H;

F456 A, I, L, N, R, S, Q;

Y490 A, V, L, I, P, F, M, G, S, T, C, Y, N, Q, D, E, K, R, H.

- 5 A variant of a parent *Myceliophthora thermophila* laccase, which comprises a mutation in a position corresponding to at least one of the following positions in SEQ ID No. 10:

V52 A, I, L, N, R, S, Q;

G121 A, I, L, N, R, S, Q;

F141 A, V, L, I, P, F, M, G, S, T, C, Y, N, Q, D, E, K, R, H;

- 10 Y177 A, I, L, N, R, S, Q;

H206 A, I, L, N, R, S, Q;

M260 A, I, L, N, R, S, Q;

P336 A, I, L, N, R, S, Q;

T365 A, I, L, N, R, S, Q;

I380 A, V, L, I, P, F, M, G, S, T, C, Y, N, Q, D, E, K, R, H;

I382 A, V, L, I, P, F, M, G, S, T, C, Y, N, Q, D, E, K, R, H;

V406 A, I, L, N, R, S, Q;

A506 A, V, L, I, P, F, M, G, S, T, C, Y, N, Q, D, E, K, R, H;

W507 A, I, L, N, R, S, Q;

W543 A, V, L, I, P, F, M, G, S, T, C, Y, N, Q, D, E, K, R, H.

#### Detergent composition

The laccase variants of the invention may be added to and thus become a component of a detergent composition.

- 25 The detergent composition of the invention may for example be formulated as a hand or machine laundry detergent composition including a laundry additive composition suitable for pre-treatment of stained fabrics and a rinse added fabric softener composition, or be formulated as a detergent composition for use in general household hard surface cleaning operations, or be formulated for hand or machine dishwashing operations.

- 30 In a specific aspect, the invention provides a detergent additive comprising the laccase variants of the invention. The detergent additive as well as the detergent composition may comprise one or more other enzymes such as a protease, a lipase, a cutinase, an amylase, a carbohydrase, a cellulase, a pectinase, a mannanase, an arabinase, a galactanase, a xylanase, an oxidase, e.g., a laccase, and/or a peroxidase.

In general the properties of the chosen enzyme(s) should be compatible with the selected detergent, (i.e. pH-optimum, compatibility with other enzymatic and non-enzymatic ingredients, etc.), and the enzyme(s) should be present in effective amounts.

Proteases: Suitable proteases include those of animal, vegetable or microbial origin.

5 Microbial origin is preferred. Chemically modified or protein engineered mutants are included. The protease may be a serine protease or a metallo protease, preferably an alkaline microbial protease or a trypsin-like protease. Examples of alkaline proteases are subtilisins, especially those derived from *Bacillus*, e.g., subtilisin Novo, subtilisin Carlsberg, subtilisin 309, subtilisin 147 and subtilisin 168 (described in WO 89/06279). Examples of trypsin-like proteases are  
10 trypsin (e.g. of porcine or bovine origin) and the *Fusarium* protease described in WO 89/06270 and WO 94/25583.

Examples of useful proteases are the variants described in WO 92/19729, WO 98/20115, WO 98/20116, and WO 98/34946, especially the variants with substitutions in one or more of the following positions: 27, 36, 57, 76, 87, 97, 101, 104, 120, 123, 167, 170, 194, 206, 218, 222, 224, 235 and 274.

Preferred commercially available protease enzymes include Alcalase™, Savinase™, Primase™, Everlase™, Esperase™, and Kannase™ (Novozymes A/S), Maxatase™, Maxacal™, Maxapem™, Properase™, Purafect™, Purafect OxP™, FN2™, and FN3™ (Genencor International Inc.).

Lipases: Suitable lipases include those of bacterial or fungal origin. Chemically modified or protein engineered mutants are included. Examples of useful lipases include lipases from *Humicola* (synonym *Thermomyces*), e.g. from *H. lanuginosa* (*T. lanuginosus*) as described in EP 258 068 and EP 305 216 or from *H. insolens* as described in WO 96/13580, a *Pseudomonas* lipase, e.g. from *P. alcaligenes* or *P. pseudoalcaligenes* (EP 218 272), *P. cepacia* (EP 331 376), *P. stutzeri* (GB 1,372,034), *P. fluorescens*, *Pseudomonas* sp. strain SD  
25 705 (WO 95/06720 and WO 96/27002), *P. wisconsinensis* (WO 96/12012), a *Bacillus* lipase, e.g. from *B. subtilis* (Dartois et al. (1993), Biochemica et Biophysica Acta, 1131, 253-360), *B. stearothermophilus* (JP 64/744992) or *B. pumilus* (WO 91/16422).

Other examples are lipase variants such as those described in WO 92/05249, WO  
30 94/01541, EP 407 225, EP 260 105, WO 95/35381, WO 96/00292, WO 95/30744, WO 94/25578, WO 95/14783, WO 95/22615, WO 97/04079 and WO 97/07202.

Preferred commercially available lipase enzymes include Lipolase™, Lipolase Ultra™ and Lipoprime™ (Novozymes A/S).

Amylases: Suitable amylases ( $\alpha$  and/or  $\beta$ ) include those of bacterial or fungal origin. Chemically modified or protein engineered mutants are included. Amylases include, for example,  $\alpha$ -amylases obtained from *Bacillus*, e.g. a special strain of *B. licheniformis*, described in more detail in GB 1,296,839.

5        Examples of useful amylases are the variants described in WO 94/02597, WO 94/18314, WO 96/23873, and WO 97/43424, especially the variants with substitutions in one or more of the following positions: 15, 23, 105, 106, 124, 128, 133, 154, 156, 181, 188, 190, 197, 202, 208, 209, 243, 264, 304, 305, 391, 408, and 444.

Commercially available amylases are Duramyl™, Termamyl™, Fungamyl™ and BAN™  
10 (Novozymes A/S), Rapidase™ and Purastar™ (Genencor International Inc.).

Cellulases: Suitable cellulases include those of bacterial or fungal origin. Chemically modified or protein engineered mutants are included. Suitable cellulases include cellulases from the genera *Bacillus*, *Pseudomonas*, *Humicola*, *Fusarium*, *Thielavia*, *Acremonium*, e.g. the fungal cellulases produced from *Humicola insolens*, *Myceliophthora thermophila* and *Fusarium oxysporum* disclosed in US 4,435,307, US 5,648,263, US 5,691,178, US 5,776,757 and WO 89/09259.

Especially suitable cellulases are the alkaline or neutral cellulases having colour care benefits. Examples of such cellulases are cellulases described in EP 0 495 257, EP 0 531 372, WO 96/11262, WO 96/29397, WO 98/08940. Other examples are cellulase variants such as those described in WO 94/07998, EP 0 531 315, US 5,457,046, US 5,686,593, US 5,763,254, WO 95/24471, WO 98/12307 and PCT/DK98/00299.

Commercially available cellulases include Celluzyme™, and Carezyme™ (Novozymes A/S), Clazinase™, and Puradax HA™ (Genencor International Inc.), and KAC-500(B)™ (Kao Corporation).

25        Peroxidases/Oxidases: Suitable peroxidases/oxidases include those of plant, bacterial or fungal origin. Chemically modified or protein engineered mutants are included. Examples of useful peroxidases include peroxidases from *Coprinus*, e.g. from *C. cinereus*, and variants thereof as those described in WO 93/24618, WO 95/10602, and WO 98/15257.

The detergent enzyme(s) may be included in a detergent composition by adding  
30 separate additives containing one or more enzymes, or by adding a combined additive comprising all of these enzymes. A detergent additive of the invention, i.e. a separate additive or a combined additive, can be formulated e.g. as a granulate, a liquid, a slurry, etc. Preferred detergent additive formulations are granulates, in particular non-dusting granulates, liquids, in particular stabilized liquids, or slurries.

Non-dusting granulates may be produced, e.g., as disclosed in US 4,106,991 and 4,661,452 and may optionally be coated by methods known in the art. Examples of waxy coating materials are poly(ethylene oxide) products (polyethyleneglycol, PEG) with mean molar weights of 1000 to 20000; ethoxylated nonylphenols having from 16 to 50 ethylene oxide units; 5 ethoxylated fatty alcohols in which the alcohol contains from 12 to 20 carbon atoms and in which there are 15 to 80 ethylene oxide units; fatty alcohols; fatty acids; and mono- and di- and triglycerides of fatty acids. Examples of film-forming coating materials suitable for application by fluid bed techniques are given in GB 1483591. Liquid enzyme preparations may, for instance, be stabilized by adding a polyol such as propylene glycol, a sugar or sugar alcohol, lactic acid or 10 boric acid according to established methods. Protected enzymes may be prepared according to the method disclosed in EP 238,216.

The detergent composition of the invention may be in any convenient form, e.g., a bar, a tablet, a powder, a granule, a paste or a liquid. A liquid detergent may be aqueous, typically containing up to 70 % water and 0-30 % organic solvent, or non-aqueous.

The detergent composition comprises one or more surfactants, which may be non-ionic including semi-polar and/or anionic and/or cationic and/or zwitterionic. The surfactants are typically present at a level of from 0.1% to 60% by weight.

When included therein the detergent will usually contain from about 1% to about 40% of an anionic surfactant such as linear alkylbenzenesulfonate, alpha-olefinsulfonate, alkyl sulfate (fatty alcohol sulfate), alcohol ethoxysulfate, secondary alkanesulfonate, alpha-sulfo fatty acid methyl ester, alkyl- or alkenylsuccinic acid or soap.

When included therein the detergent will usually contain from about 0.2% to about 40% of a non-ionic surfactant such as alcohol ethoxylate, nonylphenol ethoxylate, alkylpolyglycoside, alkyldimethylamineoxide, ethoxylated fatty acid monoethanolamide, fatty acid 25 monoethanolamide, polyhydroxy alkyl fatty acid amide, or N-acyl N-alkyl derivatives of glucosamine ("glucamides").

The detergent may contain 0-65 % of a detergent builder or complexing agent such as zeolite, diphosphate, triphosphate, phosphonate, carbonate, citrate, nitrilotriacetic acid, ethylenediaminetetraacetic acid, diethylenetriaminepentaacetic acid, alkyl- or alkenylsuccinic 30 acid, soluble silicates or layered silicates (e.g. SKS-6 from Hoechst).

The detergent may comprise one or more polymers. Examples are carboxymethylcellulose, poly(vinylpyrrolidone), poly (ethylene glycol), poly(vinyl alcohol), poly(vinylpyridine-N-oxide), poly(vinylimidazole), polycarboxylates such as polyacrylates, maleic/acrylic acid copolymers and lauryl methacrylate/acrylic acid copolymers.

The detergent may contain a bleaching system which may comprise a H<sub>2</sub>O<sub>2</sub> source such as perborate or percarbonate which may be combined with a peracid-forming bleach activator such as tetraacetythylenediamine or nonanoyloxybenzenesulfonate. Alternatively, the bleaching system may comprise peroxyacids of e.g. the amide, imide, or sulfone type.

5 The enzyme(s) of the detergent composition of the invention may be stabilized using conventional stabilizing agents, e.g., a polyol such as propylene glycol or glycerol, a sugar or sugar alcohol, lactic acid, boric acid, or a boric acid derivative, e.g., an aromatic borate ester, or a phenyl boronic acid derivative such as 4-formylphenyl boronic acid, and the composition may be formulated as described in e.g. WO 92/19709 and WO 92/19708.

10 The detergent may also contain other conventional detergent ingredients such as e.g. fabric conditioners including clays, foam boosters, suds suppressors, anti-corrosion agents, soil-suspending agents, anti-soil redeposition agents, dyes, bactericides, optical brighteners, hydrotropes, tarnish inhibitors, or perfumes.

It is at present contemplated that in the detergent compositions any enzyme, in particular the laccase variants of the invention, may be added in an amount corresponding to 0.01-100 mg of enzyme protein per liter of wash liquor, preferably 0.05-10 mg of enzyme protein per liter of wash liquor, more preferably 0.1-5 mg of enzyme protein per liter of wash liquor, and most preferably 0.1-1 mg of enzyme protein per liter of wash liquor.

The laccase variants of the invention may additionally be incorporated in the detergent formulations disclosed in WO 97/07202 which is hereby incorporated as reference.

#### Methods of preparing laccase variants

Several methods for introducing mutations into genes are known in the art. After a brief discussion of the cloning of laccase-encoding DNA sequences, methods for generating mutations  
25 at specific sites within the laccase-encoding sequence will be discussed.

#### Cloning a DNA sequence encoding a laccase

The DNA sequence encoding a parent laccase may be isolated from any cell or microorganism producing the laccase in question, using various methods well known in the art.

30 First, a genomic DNA and/or cDNA library should be constructed using chromosomal DNA or messenger RNA from the organism that produces the laccase to be studied. Then, if the amino acid sequence of the laccase is known, homologous, labelled oligonucleotide probes may be synthesized and used to identify laccase-encoding clones from a genomic library prepared from the organism in question. Alternatively, a labelled oligonucleotide probe containing sequences



homologous to a known laccase gene could be used as a probe to identify laccase-encoding clones, using hybridization and washing conditions of lower stringency.

A method for identifying laccase-encoding clones involves inserting cDNA into an expression vector, such as a plasmid, transforming laccase-negative fungi with the resulting cDNA library, and then plating the transformed fungi onto agar containing a substrate for laccase, thereby allowing clones expressing the laccase to be identified.

Alternatively, the DNA sequence encoding the enzyme may be prepared synthetically by established standard methods, e.g. the phosphoroamidite method. In the phosphoroamidite method, oligonucleotides are synthesized, e.g. in an automatic DNA synthesizer, purified, annealed, ligated and cloned in appropriate vectors.

Finally, the DNA sequence may be of mixed genomic and synthetic origin, mixed synthetic and cDNA origin or mixed genomic and cDNA origin, prepared by ligating fragments of synthetic, genomic or cDNA origin (as appropriate, the fragments corresponding to various parts of the entire DNA sequence), in accordance with standard techniques. The DNA sequence may also be prepared by polymerase chain reaction (PCR) using specific primers.

#### Site-directed mutagenesis

Once a laccase-encoding DNA sequence has been isolated, and desirable sites for mutation identified, mutations may be introduced using synthetic oligonucleotides. These oligonucleotides contain nucleotide sequences flanking the desired mutation sites; mutant nucleotides are inserted during oligonucleotide synthesis. In a specific method, a single-stranded gap of DNA, bridging the laccase-encoding sequence, is created in a vector carrying the laccase gene. Then the synthetic nucleotide, bearing the desired mutation, is annealed to a homologous portion of the single-stranded DNA. The remaining gap is then filled in with T7 DNA polymerase and the construct is ligated using T4 ligase. A specific example of this method is described in Morinaga et al. (1984). US 4,760,025 discloses the introduction of oligonucleotides encoding multiple mutations by performing minor alterations of the cassette. However, an even greater variety of mutations can be introduced at any one time by the Morinaga method, because a multitude of oligonucleotides, of various lengths, can be introduced.

Another method of introducing mutations into laccase-encoding DNA sequences is described in Nelson and Long (1989). It involves the 3-step generation of a PCR fragment containing the desired mutation introduced by using a chemically synthesized DNA strand as one of the primers in the PCR reactions. From the PCR-generated fragment, a DNA fragment carrying

the mutation may be isolated by cleavage with restriction endonucleases and reinserted into an expression plasmid.

### Random mutagenesis

5       The random mutagenesis of a DNA sequence encoding a parent laccase may conveniently be performed by use of any method known in the art.

For instance, the random mutagenesis may be performed by use of a suitable physical or chemical mutagenizing agent, by use of a suitable oligonucleotide, or by subjecting the DNA sequence to PCR generated mutagenesis. Furthermore, the random mutagenesis may be  
10 performed by use of any combination of these mutagenizing agents.

The mutagenizing agent may, e.g., be one which induces transitions, transversions, inversions, scrambling, deletions, and/or insertions.

Examples of a physical or chemical mutagenizing agent suitable for the present purpose include ultraviolet (UV) irradiation, hydroxylamine, N-methyl-N'-nitro-N-nitrosoguanidine (MNNG), O-methyl hydroxylamine, nitrous acid, ethyl methane sulphonate (EMS), sodium bisulphite, formic acid, and nucleotide analogues.

When such agents are used, the mutagenesis is typically performed by incubating the DNA sequence encoding the parent enzyme to be mutagenized in the presence of the mutagenizing agent of choice under suitable conditions for the mutagenesis to take place, and selecting for  
20 mutated DNA having the desired properties.

When the mutagenesis is performed by the use of an oligonucleotide, the oligonucleotide may be doped or spiked with the three non-parent nucleotides during the synthesis of the oligonucleotide at the positions which are to be changed. The doping or spiking may be done so that codons for unwanted amino acids are avoided. The doped or spiked oligonucleotide can be  
25 incorporated into the DNA encoding the laccase enzyme by any published technique, using e.g. PCR, LCR or any DNA polymerase and ligase.

When PCR-generated mutagenesis is used, either a chemically treated or non-treated gene encoding a parent laccase enzyme is subjected to PCR under conditions that increase the misincorporation of nucleotides (Deshler 1992; Leung et al., Technique, Vol.1, 1989, pp. 11-15).

30       A mutator strain of *E. coli* (Fowler et al., Molec. Gen. Genet., 133, 1974, pp. 179-191), *S. cerevisiae* or any other microbial organism may be used for the random mutagenesis of the DNA encoding the laccase enzyme by e.g. transforming a plasmid containing the parent enzyme into the mutator strain, growing the mutator strain with the plasmid and isolating the mutated plasmid from

the mutator strain. The mutated plasmid may subsequently be transformed into the expression organism.

The DNA sequence to be mutagenized may conveniently be present in a genomic or cDNA library prepared from an organism expressing the parent laccase enzyme. Alternatively, the DNA sequence may be present on a suitable vector such as a plasmid or a bacteriophage, which as such may be incubated with or otherwise exposed to the mutagenizing agent. The DNA to be mutagenized may also be present in a host cell either by being integrated in the genome of said cell or by being present on a vector harboured in the cell. Finally, the DNA to be mutagenized may be in isolated form. It will be understood that the DNA sequence to be subjected to random mutagenesis is preferably a cDNA or a genomic DNA sequence.

In some cases it may be convenient to amplify the mutated DNA sequence prior to the expression step or the screening step being performed. Such amplification may be performed in accordance with methods known in the art, the presently preferred method being PCR-generated amplification using oligonucleotide primers prepared on the basis of the DNA or amino acid sequence of the parent enzyme.

Subsequent to the incubation with or exposure to the mutagenizing agent, the mutated DNA is expressed by culturing a suitable host cell carrying the DNA sequence under conditions allowing expression to take place. The host cell used for this purpose may be one which has been transformed with the mutated DNA sequence, optionally present on a vector, or one which was carried the DNA sequence encoding the parent enzyme during the mutagenesis treatment. Examples of suitable host cells are fungal hosts such as *Aspergillus niger* or *Aspergillus oryzae*.

The mutated DNA sequence may further comprise a DNA sequence encoding functions permitting expression of the mutated DNA sequence.

## 25 Localized random mutagenesis

The random mutagenesis may advantageously be localized to a part of the parent laccase in question. This may, e.g., be advantageous when certain regions of the enzyme have been identified to be of particular importance for a given property of the enzyme, and when modified are expected to result in a variant having improved properties. Such regions may normally be identified when the tertiary structure of the parent enzyme has been elucidated and related to the function of the enzyme.

The localized random mutagenesis is conveniently performed by use of PCR-generated mutagenesis techniques as described above or any other suitable technique known in the art.

Alternatively, the DNA sequence encoding the part of the DNA sequence to be modified may be isolated, e.g. by being inserted into a suitable vector, and said part may subsequently be subjected to mutagenesis by use of any of the mutagenesis methods discussed above.

With respect to the screening step in the above-mentioned method of the invention, this  
5 may conveniently be performed by use of aa filter assay based on the following principle:

A microorganism capable of expressing the mutated laccase enzyme of interest is incubated on a suitable medium and under suitable conditions for the enzyme to be secreted, the medium being provided with a double filter comprising a first protein-binding filter and on top of that a second filter exhibiting a low protein binding capability. The microorganism is located on the  
10 second filter. Subsequent to the incubation, the first filter comprising enzymes secreted from the microorganisms is separated from the second filter comprising the microorganisms. The first filter is subjected to screening for the desired enzymatic activity and the corresponding microbial colonies present on the second filter are identified.

The filter used for binding the enzymatic activity may be any protein binding filter e.g. nylon or nitrocellulose. The top filter carrying the colonies of the expression organism may be any filter that has no or low affinity for binding proteins e.g. cellulose acetate or Durapore™. The filter may be pretreated with any of the conditions to be used for screening or may be treated during the detection of enzymatic activity.

The enzymatic activity may be detected by a dye, fluorescence, precipitation, pH indicator, IR-absorbance or any other known technique for detection of enzymatic activity.

The detecting compound may be immobilized by any immobilizing agent, e.g., agarose, agar, gelatine, polyacrylamide, starch, filter paper, cloth; or any combination of immobilizing agents.

## 25 Laccase activity

The laccase activity may be measured using 10-(2-hydroxyethyl)-phenoxazine (HEPO) as substrate. HEPO was synthesized using the same procedure as described for 10-(2-hydroxyethyl)-phenothiazine, (G. Cauquil in Bulletin de la Society Chimique de France, 1960, p. 1049). In the presence of oxygen laccases (E.C. 1.10.3.2) oxidize HEPO to a HEPO radical that  
30 can be monitored photometrically at 528 nm.

The *Coprinus cinereus* laccase was measured using 0.4 mM HEPO in 50 mM sodium acetate, pH 5.0, 0.05% TWEEN-20 at 30°C. The absorbance at 528 nm was followed for 200 s and the rate calculated from the linear part of the progress curve.

The *Myceliophthora thermophila* laccase was measured using 0.4 mM HEPO in 25 mM Tris-HCl, pH 7.5, 0.05% Tween-20 at 30°C. The absorbance at 528 nm was followed for 200 s and the rate calculated from the linear part of the progress curve.

The *Polyporus pinsitus* laccase was measured using 0.4 mM HEPO in 50 mM MES-5 NaOH, pH 5.5. The absorbance at 528 nm was followed for 200 sec. and the rate calculated from the linear part of the progress curve.

#### Testing of variants of the invention

The stability against oxidation by radicals (oxidative stability) of *Coprinus* variants or 10 *Coprinus*-like variants may be measured as described in the following.

The enzyme is diluted in 100 mM phosphate pH 5 or 6 (which is closest to the pH optimum for the enzyme with methylsyringate as substrate) to a concentration of 0.1 mg enzyme protein per ml.

To 0.9 ml enzyme dilution is added 0.1 ml 5 mM methylsyringate (in 50% ethanol). As a reference 0.9 ml enzyme dilution is added 0.1 ml 50 % ethanol.

Both sample and reference are stored at room temperature (approx. 25°C) for 20 hours. After dilution residual activity of sample and reference is determined by the LACU or LAMU assays using syringaldazine as substrate.

Conditions for some fungal laccases are:

| <u>Laccase from</u>               | <u>Incubation</u> | <u>Assay</u> |
|-----------------------------------|-------------------|--------------|
| <i>Polyporus / Trametes</i>       | pH 5              | LACU         |
| <i>Coprinus cinereus</i>          | pH 6              | LAMU         |
| <i>Myceliophthora thermophila</i> | pH 6              | LAMU         |
| <i>Rhizoctonia solani</i>         | pH 6              | LAMU         |

#### Laccase Activity (LACU)

Laccase activity may be determined from the oxidation of syringaldazin under aerobic conditions. The violet colour produced is photometered at 530 nm. The analytical conditions are 19 mM syringaldazin, 23 mM acetate buffer, pH 5.5, 30°C, 1 min. reaction time.

1 laccase unit (LACU) is the amount of enzyme that catalyses the conversion of 1.0 30  $\mu$ mole syringaldazin per minute at these conditions.

#### Laccase Activity (LAMU)

Laccase activity may be determined from the oxidation of syringaldazin under aerobic conditions. The violet colour produced is photometered at 530 nm. The analytical conditions are 19 mM syringaldazin, 23 mM Tris/maleate buffer, pH 7.5, 30°C, 1 min. reaction time.

1 laccase unit (LAMU) is the amount of enzyme that catalyses the conversion of 1.0 5  $\mu$ mole syringaldazin per minute at these conditions.

#### Expression of laccase variants

According to the invention, a DNA sequence encoding the variant produced by methods described above, or by any alternative methods known in the art, can be expressed, in enzyme 10 form, using an expression vector which typically includes control sequences encoding a promoter, operator, ribosome binding site, translation initiation signal, and, optionally, a repressor gene or various activator genes.

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The recombinant expression vector carrying the DNA sequence encoding a laccase variant of the invention may be any vector which may conveniently be subjected to recombinant DNA procedures, and the choice of vector will often depend on the host cell into which it is to be introduced. Thus, the vector may be an autonomously replicating vector, i.e. a vector which exists as an extrachromosomal entity, the replication of which is independent of chromosomal replication, e.g. a plasmid, a bacteriophage or an extrachromosomal element, minichromosome or an artificial chromosome. Alternatively, the vector may be one which, when introduced into a host cell, is integrated into the host cell genome and replicated together with the chromosome(s) into which it has been integrated.

In the vector, the DNA sequence should be operably connected to a suitable promoter sequence. The promoter may be any DNA sequence which shows transcriptional activity in the host cell of choice and may be derived from genes encoding proteins either homologous or 25 heterologous to the host cell. Examples of suitable promoters for directing the transcription of the DNA sequence encoding a laccase variant of the invention, especially in a fungal host, are those derived from the gene encoding *A. oryzae* TAKA amylase, *Rhizomucor miehei* aspartic proteinase, *A. niger* neutral  $\alpha$ -amylase, *A. niger* acid stable  $\alpha$ -amylase, *A. niger* glucoamylase, *Rhizomucor miehei* lipase, *A. oryzae* alkaline protease, *A. oryzae* triose phosphate isomerase or *A. nidulans* 30 acetamidase.

The expression vector of the invention may also comprise a suitable transcription terminator and, in eukaryotes, polyadenylation sequences operably connected to the DNA sequence encoding the laccase variant of the invention. Termination and polyadenylation sequences may suitably be derived from the same sources as the promoter.

The vector may further comprise a DNA sequence enabling the vector to replicate in the host cell in question. Examples of such sequences are the origins of replication of plasmids pUC19, pACYC177, pUB110, pE194, pAMB1 and pIJ702.

The vector may also comprise a selectable marker, e.g. a gene, the product of which complements a defect in the host cell, such as one which confers antibiotic resistance such as ampicillin, kanamycin, chloramphenicol or tetracyclin resistance. Furthermore, the vector may comprise *Aspergillus* selection markers such as amdS, argB, niaD and sC, a marker giving rise to hygromycin resistance, or the selection may be accomplished by co-transformation, e.g. as described in WO 91/17243.

The procedures used to ligate the DNA construct of the invention encoding a laccase variant, the promoter, terminator and other elements, respectively, and to insert them into suitable vectors containing the information necessary for replication, are well known to persons skilled in the art (cf., for instance, Sambrook et al. (1989)).

The cell of the invention, either comprising a DNA construct or an expression vector of the invention as defined above, is advantageously used as a host cell in the recombinant production of a laccase variant of the invention. The cell may be transformed with the DNA construct of the invention encoding the variant, conveniently by integrating the DNA construct (in one or more copies) in the host chromosome. This integration is generally considered to be an advantage as the DNA sequence is more likely to be stably maintained in the cell. Integration of the DNA constructs into the host chromosome may be performed according to conventional methods, e.g. by homologous or heterologous recombination. Alternatively, the cell may be transformed with an expression vector as described above in connection with the different types of host cells.

The cell of the invention may be a cell of a higher organism such as a mammal or an insect, but is preferably a microbial cell, e.g. a fungal cell.

The filamentous fungus may advantageously belong to a species of *Aspergillus*, e.g. *Aspergillus oryzae* or *Aspergillus niger*. Fungal cells may be transformed by a process involving protoplast formation and transformation of the protoplasts followed by regeneration of the cell wall in a manner known *per se*. A suitable procedure for transformation of *Aspergillus* host cells is described in EP 238 023.

In a yet further aspect, the present invention relates to a method of producing a laccase variant of the invention, which method comprises cultivating a host cell as described above under conditions conducive to the production of the variant and recovering the variant from the cells and/or culture medium.

The medium used to cultivate the cells may be any conventional medium suitable for growing the host cell in question and obtaining expression of the laccase variant of the invention. Suitable media are available from commercial suppliers or may be prepared according to published recipes (e.g. as described in catalogues of the American Type Culture Collection).

- 5        The laccase variant secreted from the host cells may conveniently be recovered from the culture medium by well-known procedures, including separating the cells from the medium by centrifugation or filtration, and precipitating proteinaceous components of the medium by means of a salt such as ammonium sulphate, followed by the use of chromatographic procedures such as ion exchange chromatography, affinity chromatography, or the like.

10

#### Industrial Applications

The laccase variants of this invention possesses valuable properties allowing for various industrial applications, in particular lignin modification, paper strengthening, dye transfer inhibition in detergents, phenol polymerization, hair dyeing, bleaching of textiles (in particular bleaching of denim as described in WO 96/12845 and WO 96/12846) and waste water treatment. Any detergent composition normally used for enzymes may be used, e.g., the detergent compositions disclosed in WO 95/01426.

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# Appendix 1:

SEQRES 1 A 504 GLN ILE VAL ASN SER VAL ASP THR MET THR LEU THR ASN  
 SEQRES 2 A 504 ALA ASN VAL SER PRO ASP GLY PHE THR ARG ALA GLY ILE  
 SEQRES 3 A 504 LEU VAL ASN GLY VAL HIS GLY PRO LEU ILE ARG GLY GLY  
 5 SEQRES 4 A 504 LYS ASN ASP ASN PHE GLU LEU ASN VAL VAL ASN ASP LEU  
 SEQRES 5 A 504 ASP ASN PRO THR MET LEU ARG PRO THR SER ILE HIS TRP  
 SEQRES 6 A 504 HIS GLY LEU PHE GLN ARG GLY THR ASN TRP ALA ASN GLY  
 SEQRES 7 A 504 ALA ASP GLY VAL ASN GLN CYS PRO ILE SER PRO GLY HIS  
 SEQRES 8 A 504 ALA PHE LEU TYR LYS PHE THR PRO ALA GLY HIS ALA GLY  
 10 SEQRES 9 A 504 THR PHE TRP TYR HIS SER HIS PHE GLY THR GLN TYR CYS  
 SEQRES 10 A 504 ASP GLY LEU ARG GLY PRO MET VAL ILE TYR ASP ASP ASN  
 SEQRES 11 A 504 ASP PRO HIS ALA ALA LEU TYR ASP GLU ASP ASP GLU ASN  
 SEQRES 12 A 504 THR ILE ILE THR LEU ALA ASP TRP TYR HIS ILE PRO ALA  
 SEQRES 13 A 504 PRO SER ILE GLN GLY ALA ALA GLN PRO ASP ALA THR LEU  
 15 SEQRES 14 A 504 ILE ASN GLY LYS GLY ARG TYR VAL GLY GLY PRO ALA ALA  
 SEQRES 15 A 504 GLU LEU SER ILE VAL ASN VAL GLU GLN GLY LYS LYS TYR  
 SEQRES 16 A 504 ARG MET ARG LEU ILE SER LEU SER CYS ASP PRO ASN TRP  
 SEQRES 17 A 504 GLN PHE SER ILE ASP GLY HIS GLU LEU THR ILE ILE GLU  
 SEQRES 18 A 504 VAL ASP GLY ASN LEU THR GLU PRO HIS THR VAL ASP ARG  
 20 SEQRES 19 A 504 LEU GLN ILE PHE THR GLY GLN ARG TYR SER PHE VAL LEU  
 SEQRES 20 A 504 ASP ALA ASN GLN PRO VAL ASP ASN TYR TRP ILE ARG ALA  
 SEQRES 21 A 504 GLN PRO ASN LYS GLY ARG ASN GLY LEU ALA GLY THR PHE  
 SEQRES 22 A 504 ALA ASN GLY VAL ASN SER ALA ILE LEU ARG TYR ALA GLY  
 SEQRES 23 A 504 ALA ALA ASN ALA ASP PRO THR THR SER ALA ASN PRO ASN  
 SEQRES 24 A 504 PRO ALA GLN LEU ASN GLU ALA ASP LEU HIS ALA LEU ILE  
 SEQRES 25 A 504 ASP PRO ALA ALA PRO GLY ILE PRO THR PRO GLY ALA ALA  
 SEQRES 26 A 504 ASN VAL ASN LEU ARG PHE GLN LEU GLY PHE SER GLY GLY  
 SEQRES 27 A 504 ARG PHE THR ILE ASN GLY THR ALA TYR GLU SER PRO SER  
 SEQRES 28 A 504 VAL PRO THR LEU LEU GLN ILE MET SER GLY ALA GLN SER  
 30 SEQRES 29 A 504 ALA ASN ASP LEU LEU PRO ALA GLY SER VAL TYR GLU LEU  
 SEQRES 30 A 504 PRO ARG ASN GLN VAL VAL GLU LEU VAL VAL PRO ALA GLY  
 SEQRES 31 A 504 VAL LEU GLY GLY PRO HIS PRO PHE HIS LEU HIS GLY HIS  
 SEQRES 32 A 504 ALA PHE SER VAL VAL ARG SER ALA GLY SER SER THR TYR  
 SEQRES 33 A 504 ASN PHE VAL ASN PRO VAL LYS ARG ASP VAL VAL SER LEU  
 35 SEQRES 34 A 504 GLY VAL THR GLY ASP GLU VAL THR ILE ARG PHE VAL THR  
 SEQRES 35 A 504 ASP ASN PRO GLY PRO TRP PHE PHE HIS CYS HIS ILE GLU  
 SEQRES 36 A 504 PHE HIS LEU MET ASN GLY LEU ALA ILE VAL PHE ALA GLU  
 SEQRES 37 A 504 ASP MET ALA ASN THR VAL ASP ALA ASN ASN PRO PRO VAL

|        |        |     |                         |   |
|--------|--------|-----|-------------------------|---|
| SEQRES | 38     | A   | 504                     | GLU TRP ALA GLN LEU CYS GLU ILE TYR ASP ASP LEU PRO |
| SEQRES | 39     | A   | 504                     | PRO GLU ALA THR SER ILE GLN THR VAL VAL             |
| SSBOND | 1      | CYS | 85                      | CYS 487   |
| SSBOND | 2      | CYS | 117                     | CYS 204   |
| 5      | CRYST  |     | 45.390 85.720 143.070   | 90.00 90.00 90.00 P212121                           |
|        | SCALE1 |     | 0.02203 0.00000 0.00000 | 0.00000   |
|        | SCALE2 |     | 0.00000 0.01167 0.00000 | 0.00000   |
|        | SCALE3 |     | 0.00000 0.00000 0.00699 | 0.00000   |
|        | ATOM   | 1   | N ALA A 1 0             | 18.748 34.495 5.326 1.00 36.36                      |
| 10     | ATOM   | 2   | CA ALA A 1 0            | 19.554 35.757 5.185 1.00 35.87                      |
|        | ATOM   | 3   | C ALA A 1 0             | 19.785 36.380 6.558 1.00 34.53                      |
|        | ATOM   | 4   | O ALA A 1 0             | 19.248 35.884 7.577 1.00 35.40                      |
|        | ATOM   | 5   | CB ALA A 1 0            | 19.050 36.675 4.107 1.00 36.65                      |
|        | ATOM   | 6   | N ILE A 2 0             | 20.844 37.201 6.659 1.00 31.00                      |
|        | ATOM   | 7   | CA ILE A 2 0            | 21.310 37.654 7.963 1.00 27.71                      |
|        | ATOM   | 8   | C ILE A 2 0             | 21.368 39.165 8.117 1.00 25.19                      |
|        | ATOM   | 9   | O ILE A 2 0             | 21.789 39.861 7.192 1.00 23.77                      |
|        | ATOM   | 10  | CB ILE A 2 0            | 22.744 37.107 8.206 1.00 28.28                      |
|        | ATOM   | 11  | CG1 ILE A 2 0           | 22.790 35.590 8.022 1.00 28.54                      |
|        | ATOM   | 12  | CG2 ILE A 2 0           | 23.285 37.557 9.554 1.00 27.91                      |
|        | ATOM   | 13  | CD1 ILE A 2 0           | 23.334 34.738 9.130 1.00 29.32                      |
|        | ATOM   | 14  | N VAL A 3 0             | 20.986 39.659 9.283 1.00 22.31                      |
|        | ATOM   | 15  | CA VAL A 3 0            | 21.093 41.092 9.540 1.00 22.78                      |
|        | ATOM   | 16  | C VAL A 3 0             | 22.246 41.297 10.524 1.00 22.62                     |
|        | ATOM   | 17  | O VAL A 3 0             | 22.460 40.556 11.467 1.00 21.74                     |
|        | ATOM   | 18  | CB VAL A 3 0            | 19.801 41.849 9.799 1.00 23.54                      |
|        | ATOM   | 19  | CG1 VAL A 3 0           | 18.537 40.985 9.684 1.00 21.30                      |
|        | ATOM   | 20  | CG2 VAL A 3 0           | 19.760 42.709 11.055 1.00 21.32                     |
|        | ATOM   | 21  | N ASN A 4 0             | 23.122 42.261 10.209 1.00 23.39                     |
| 30     | ATOM   | 22  | CA ASN A 4 0            | 24.303 42.520 11.021 1.00 23.45                     |
|        | ATOM   | 23  | C ASN A 4 0             | 24.002 43.517 12.126 1.00 24.44                     |
|        | ATOM   | 24  | O ASN A 4 0             | 22.928 44.122 12.160 1.00 23.05                     |
|        | ATOM   | 25  | CB ASN A 4 0            | 25.477 42.965 10.149 1.00 24.77                     |
|        | ATOM   | 26  | CG ASN A 4 0            | 25.726 41.991 9.021 1.00 26.62                      |
| 35     | ATOM   | 27  | OD1 ASN A 4 0           | 25.668 42.388 7.849 1.00 30.29                      |
|        | ATOM   | 28  | ND2 ASN A 4 0           | 25.923 40.719 9.324 1.00 27.59                      |
|        | ATOM   | 29  | N SER A 5 0             | 24.960 43.707 13.040 1.00 24.28                     |
|        | ATOM   | 30  | CA SER A 5 0            | 24.702 44.636 14.143 1.00 25.77                     |

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|    |      |    |     |     |   |    |   |        |        |        |      |       |
|----|------|----|-----|-----|---|----|---|--------|--------|--------|------|-------|
|    | ATOM | 31 | C   | SER | A | 5  | 0 | 24.595 | 46.090 | 13.701 | 1.00 | 24.41 |
|    | ATOM | 32 | O   | SER | A | 5  | 0 | 23.973 | 46.862 | 14.452 | 1.00 | 23.55 |
|    | ATOM | 33 | CB  | SER | A | 5  | 0 | 25.741 | 44.405 | 15.240 | 1.00 | 26.18 |
|    | ATOM | 34 | OG  | SER | A | 5  | 0 | 26.976 | 44.750 | 14.641 | 1.00 | 27.89 |
| 5  | ATOM | 35 | N   | VAL | A | 6  | 0 | 25.104 | 46.517 | 12.539 | 1.00 | 24.01 |
|    | ATOM | 36 | CA  | VAL | A | 6  | 0 | 24.770 | 47.863 | 12.096 | 1.00 | 25.06 |
|    | ATOM | 37 | C   | VAL | A | 6  | 0 | 24.131 | 47.617 | 10.731 | 1.00 | 25.57 |
|    | ATOM | 38 | O   | VAL | A | 6  | 0 | 24.778 | 47.030 | 9.874  | 1.00 | 28.07 |
|    | ATOM | 39 | CB  | VAL | A | 6  | 0 | 25.722 | 49.032 | 12.155 | 1.00 | 26.65 |
| 10 | ATOM | 40 | CG1 | VAL | A | 6  | 0 | 26.937 | 48.759 | 13.025 | 1.00 | 26.73 |
|    | ATOM | 41 | CG2 | VAL | A | 6  | 0 | 26.098 | 49.614 | 10.801 | 1.00 | 25.50 |
|    | ATOM | 42 | N   | ASP | A | 7  | 0 | 22.848 | 47.952 | 10.605 | 1.00 | 23.82 |
|    | ATOM | 43 | CA  | ASP | A | 7  | 0 | 22.173 | 47.543 | 9.369  | 1.00 | 24.07 |
|    | ATOM | 44 | C   | ASP | A | 7  | 0 | 20.794 | 48.170 | 9.276  | 1.00 | 23.66 |
|    | ATOM | 45 | O   | ASP | A | 7  | 0 | 20.342 | 48.845 | 10.204 | 1.00 | 23.47 |
|    | ATOM | 46 | CB  | ASP | A | 7  | 0 | 21.996 | 46.012 | 9.444  | 1.00 | 23.43 |
|    | ATOM | 47 | CG  | ASP | A | 7  | 0 | 22.017 | 45.317 | 8.111  | 1.00 | 23.78 |
|    | ATOM | 48 | OD1 | ASP | A | 7  | 0 | 21.805 | 45.937 | 7.055  | 1.00 | 23.74 |
|    | ATOM | 49 | OD2 | ASP | A | 7  | 0 | 22.255 | 44.089 | 8.099  | 1.00 | 24.62 |
|    | ATOM | 50 | N   | THR | A | 8  | 0 | 20.155 | 47.881 | 8.158  | 1.00 | 23.88 |
|    | ATOM | 51 | CA  | THR | A | 8  | 0 | 18.799 | 48.359 | 7.928  | 1.00 | 24.45 |
|    | ATOM | 52 | C   | THR | A | 8  | 0 | 17.813 | 47.189 | 7.950  | 1.00 | 22.49 |
|    | ATOM | 53 | O   | THR | A | 8  | 0 | 18.143 | 46.142 | 7.377  | 1.00 | 22.56 |
|    | ATOM | 54 | CB  | THR | A | 8  | 0 | 18.694 | 49.108 | 6.579  | 1.00 | 25.75 |
|    | ATOM | 55 | OG1 | THR | A | 8  | 0 | 19.573 | 50.242 | 6.719  | 1.00 | 28.53 |
|    | ATOM | 56 | CG2 | THR | A | 8  | 0 | 17.295 | 49.656 | 6.339  | 1.00 | 25.55 |
|    | ATOM | 57 | N   | MET | A | 9  | 0 | 16.677 | 47.364 | 8.602  | 1.00 | 19.10 |
|    | ATOM | 58 | CA  | MET | A | 9  | 0 | 15.650 | 46.311 | 8.616  | 1.00 | 20.47 |
|    | ATOM | 59 | C   | MET | A | 9  | 0 | 14.392 | 46.863 | 7.925  | 1.00 | 21.97 |
| 30 | ATOM | 60 | O   | MET | A | 9  | 0 | 13.638 | 47.638 | 8.544  | 1.00 | 19.49 |
|    | ATOM | 61 | CB  | MET | A | 9  | 0 | 15.308 | 45.871 | 10.022 | 1.00 | 20.49 |
|    | ATOM | 62 | CG  | MET | A | 9  | 0 | 16.351 | 44.982 | 10.682 | 1.00 | 22.11 |
|    | ATOM | 63 | SD  | MET | A | 9  | 0 | 16.192 | 44.917 | 12.482 | 1.00 | 24.71 |
|    | ATOM | 64 | CE  | MET | A | 9  | 0 | 14.640 | 44.024 | 12.635 | 1.00 | 22.61 |
| 35 | ATOM | 65 | N   | THR | A | 10 | 0 | 14.246 | 46.516 | 6.641  | 1.00 | 21.81 |
|    | ATOM | 66 | CA  | THR | A | 10 | 0 | 13.073 | 47.064 | 5.926  | 1.00 | 23.43 |
|    | ATOM | 67 | C   | THR | A | 10 | 0 | 11.912 | 46.081 | 6.046  | 1.00 | 22.90 |
|    | ATOM | 68 | O   | THR | A | 10 | 0 | 12.056 | 44.890 | 5.719  | 1.00 | 23.55 |

|    |      |     |     |     |   |    |   |        |        |        |      |       |
|----|------|-----|-----|-----|---|----|---|--------|--------|--------|------|-------|
|    | ATOM | 69  | CB  | THR | A | 10 | 0 | 13.390 | 47.384 | 4.459  | 1.00 | 24.69 |
|    | ATOM | 70  | OG1 | THR | A | 10 | 0 | 14.533 | 48.261 | 4.456  | 1.00 | 26.08 |
|    | ATOM | 71  | CG2 | THR | A | 10 | 0 | 12.216 | 48.028 | 3.742  | 1.00 | 23.95 |
|    | ATOM | 72  | N   | LEU | A | 11 | 0 | 10.820 | 46.600 | 6.583  | 1.00 | 21.13 |
| 5  | ATOM | 73  | CA  | LEU | A | 11 | 0 | 9.615  | 45.836 | 6.846  | 1.00 | 21.10 |
|    | ATOM | 74  | C   | LEU | A | 11 | 0 | 8.607  | 45.957 | 5.709  | 1.00 | 24.58 |
|    | ATOM | 75  | O   | LEU | A | 11 | 0 | 8.124  | 47.056 | 5.358  | 1.00 | 23.89 |
|    | ATOM | 76  | CB  | LEU | A | 11 | 0 | 9.045  | 46.411 | 8.129  | 1.00 | 21.29 |
|    | ATOM | 77  | CG  | LEU | A | 11 | 0 | 9.474  | 45.955 | 9.508  | 1.00 | 22.26 |
| 10 | ATOM | 78  | CD1 | LEU | A | 11 | 0 | 10.952 | 45.742 | 9.692  | 1.00 | 22.42 |
|    | ATOM | 79  | CD2 | LEU | A | 11 | 0 | 8.978  | 46.931 | 10.583 | 1.00 | 22.75 |
|    | ATOM | 80  | N   | THR | A | 12 | 0 | 8.272  | 44.836 | 5.057  | 1.00 | 24.01 |
|    | ATOM | 81  | CA  | THR | A | 12 | 0 | 7.302  | 44.851 | 3.980  | 1.00 | 24.33 |
|    | ATOM | 82  | C   | THR | A | 12 | 0 | 6.322  | 43.677 | 4.123  | 1.00 | 25.34 |
| 15 | ATOM | 83  | O   | THR | A | 12 | 0 | 6.480  | 42.740 | 4.913  | 1.00 | 25.62 |
| 16 | ATOM | 84  | CB  | THR | A | 12 | 0 | 7.882  | 44.776 | 2.560  | 1.00 | 25.12 |
| 17 | ATOM | 85  | OG1 | THR | A | 12 | 0 | 8.575  | 43.548 | 2.377  | 1.00 | 24.05 |
| 18 | ATOM | 86  | CG2 | THR | A | 12 | 0 | 8.847  | 45.905 | 2.217  | 1.00 | 25.26 |
| 19 | ATOM | 87  | N   | ASN | A | 13 | 0 | 5.261  | 43.760 | 3.335  | 1.00 | 24.09 |
| 20 | ATOM | 88  | CA  | ASN | A | 13 | 0 | 4.232  | 42.722 | 3.299  | 1.00 | 22.87 |
| 21 | ATOM | 89  | C   | ASN | A | 13 | 0 | 4.422  | 41.954 | 1.989  | 1.00 | 22.13 |
| 22 | ATOM | 90  | O   | ASN | A | 13 | 0 | 4.809  | 42.600 | 1.023  | 1.00 | 22.32 |
| 23 | ATOM | 91  | CB  | ASN | A | 13 | 0 | 2.852  | 43.355 | 3.311  | 1.00 | 21.58 |
| 24 | ATOM | 92  | CG  | ASN | A | 13 | 0 | 2.526  | 44.060 | 4.607  | 1.00 | 22.50 |
| 25 | ATOM | 93  | OD1 | ASN | A | 13 | 0 | 2.187  | 45.245 | 4.648  | 1.00 | 22.20 |
| 26 | ATOM | 94  | ND2 | ASN | A | 13 | 0 | 2.615  | 43.306 | 5.705  | 1.00 | 21.81 |
| 27 | ATOM | 95  | N   | ALA | A | 14 | 0 | 4.218  | 40.655 | 1.985  | 1.00 | 21.00 |
| 28 | ATOM | 96  | CA  | ALA | A | 14 | 0 | 4.270  | 39.869 | 0.762  | 1.00 | 21.93 |
| 29 | ATOM | 97  | C   | ALA | A | 14 | 0 | 3.571  | 38.533 | 1.078  | 1.00 | 20.77 |
| 30 | ATOM | 98  | O   | ALA | A | 14 | 0 | 3.292  | 38.309 | 2.259  | 1.00 | 20.45 |
| 31 | ATOM | 99  | CB  | ALA | A | 14 | 0 | 5.676  | 39.618 | 0.248  | 1.00 | 23.72 |
| 32 | ATOM | 100 | N   | ASN | A | 15 | 0 | 3.366  | 37.695 | 0.072  | 1.00 | 18.88 |
| 33 | ATOM | 101 | CA  | ASN | A | 15 | 0 | 2.748  | 36.412 | 0.337  | 1.00 | 19.67 |
| 34 | ATOM | 102 | C   | ASN | A | 15 | 0 | 3.798  | 35.457 | 0.873  | 1.00 | 19.19 |
| 35 | ATOM | 103 | O   | ASN | A | 15 | 0 | 4.891  | 35.474 | 0.338  | 1.00 | 19.57 |
| 36 | ATOM | 104 | CB  | ASN | A | 15 | 0 | 2.114  | 35.721 | -0.875 | 1.00 | 21.13 |
| 37 | ATOM | 105 | CG  | ASN | A | 15 | 0 | 0.839  | 36.457 | -1.284 | 1.00 | 21.15 |
| 38 | ATOM | 106 | OD1 | ASN | A | 15 | 0 | 0.343  | 37.207 | -0.472 | 1.00 | 20.87 |

|    |      |     |     |     |   |    |   |        |        |        |      |       |
|----|------|-----|-----|-----|---|----|---|--------|--------|--------|------|-------|
|    | ATOM | 107 | ND2 | ASN | A | 15 | 0 | 0.379  | 36.284 | -2.501 | 1.00 | 20.00 |
|    | ATOM | 108 | N   | VAL | A | 16 | 0 | 3.358  | 34.614 | 1.772  | 1.00 | 19.11 |
|    | ATOM | 109 | CA  | VAL | A | 16 | 0 | 4.322  | 33.628 | 2.342  | 1.00 | 18.90 |
|    | ATOM | 110 | C   | VAL | A | 16 | 0 | 3.626  | 32.293 | 2.345  | 1.00 | 19.25 |
| 5  | ATOM | 111 | O   | VAL | A | 16 | 0 | 2.386  | 32.281 | 2.406  | 1.00 | 16.71 |
|    | ATOM | 112 | CB  | VAL | A | 16 | 0 | 4.612  | 34.317 | 3.691  | 1.00 | 19.95 |
|    | ATOM | 113 | CG1 | VAL | A | 16 | 0 | 3.990  | 33.749 | 4.937  | 1.00 | 18.58 |
|    | ATOM | 114 | CG2 | VAL | A | 16 | 0 | 6.091  | 34.603 | 3.814  | 1.00 | 21.38 |
|    | ATOM | 115 | N   | SER | A | 17 | 0 | 4.312  | 31.157 | 2.303  | 1.00 | 18.57 |
| 10 | ATOM | 116 | CA  | SER | A | 17 | 0 | 3.678  | 29.869 | 2.410  | 1.00 | 20.90 |
|    | ATOM | 117 | C   | SER | A | 17 | 0 | 4.608  | 28.866 | 3.065  | 1.00 | 21.12 |
|    | ATOM | 118 | O   | SER | A | 17 | 0 | 5.106  | 27.939 | 2.448  | 1.00 | 21.24 |
|    | ATOM | 119 | CB  | SER | A | 17 | 0 | 3.186  | 29.285 | 1.080  | 1.00 | 23.95 |
|    | ATOM | 120 | OG  | SER | A | 17 | 0 | 4.204  | 29.399 | 0.125  | 1.00 | 26.79 |
|    | ATOM | 121 | N   | PRO | A | 18 | 0 | 4.834  | 29.051 | 4.358  | 1.00 | 20.78 |
|    | ATOM | 122 | CA  | PRO | A | 18 | 0 | 5.703  | 28.216 | 5.141  | 1.00 | 20.02 |
|    | ATOM | 123 | C   | PRO | A | 18 | 0 | 5.197  | 26.793 | 5.376  | 1.00 | 19.74 |
|    | ATOM | 124 | O   | PRO | A | 18 | 0 | 5.978  | 25.920 | 5.753  | 1.00 | 17.97 |
|    | ATOM | 125 | CB  | PRO | A | 18 | 0 | 5.889  | 28.954 | 6.481  | 1.00 | 19.27 |
| 20 | ATOM | 126 | CG  | PRO | A | 18 | 0 | 4.701  | 29.832 | 6.536  | 1.00 | 21.41 |
|    | ATOM | 127 | CD  | PRO | A | 18 | 0 | 4.249  | 30.153 | 5.128  | 1.00 | 20.70 |
|    | ATOM | 128 | N   | ASP | A | 19 | 0 | 3.899  | 26.534 | 5.241  | 1.00 | 18.82 |
|    | ATOM | 129 | CA  | ASP | A | 19 | 0 | 3.323  | 25.227 | 5.475  | 1.00 | 16.87 |
|    | ATOM | 130 | C   | ASP | A | 19 | 0 | 2.548  | 24.823 | 4.237  | 1.00 | 17.28 |
| 25 | ATOM | 131 | O   | ASP | A | 19 | 0 | 1.713  | 23.929 | 4.337  | 1.00 | 17.84 |
|    | ATOM | 132 | CB  | ASP | A | 19 | 0 | 2.419  | 25.207 | 6.701  | 1.00 | 16.54 |
|    | ATOM | 133 | CG  | ASP | A | 19 | 0 | 1.192  | 26.120 | 6.596  | 1.00 | 16.67 |
|    | ATOM | 134 | OD1 | ASP | A | 19 | 0 | 1.032  | 26.935 | 5.654  | 1.00 | 14.17 |
|    | ATOM | 135 | OD2 | ASP | A | 19 | 0 | 0.360  | 26.045 | 7.529  | 1.00 | 14.56 |
| 30 | ATOM | 136 | N   | GLY | A | 20 | 0 | 2.782  | 25.469 | 3.100  | 1.00 | 17.87 |
|    | ATOM | 137 | CA  | GLY | A | 20 | 0 | 2.079  | 25.091 | 1.890  | 1.00 | 19.40 |
|    | ATOM | 138 | C   | GLY | A | 20 | 0 | 0.732  | 25.789 | 1.699  | 1.00 | 22.52 |
|    | ATOM | 139 | O   | GLY | A | 20 | 0 | 0.158  | 25.619 | 0.628  | 1.00 | 22.87 |
|    | ATOM | 140 | N   | PHE | A | 21 | 0 | 0.240  | 26.587 | 2.631  | 1.00 | 21.35 |
| 35 | ATOM | 141 | CA  | PHE | A | 21 | 0 | -0.913 | 27.443 | 2.534  | 1.00 | 20.39 |
|    | ATOM | 142 | C   | PHE | A | 21 | 0 | -0.348 | 28.855 | 2.322  | 1.00 | 21.23 |
|    | ATOM | 143 | O   | PHE | A | 21 | 0 | 0.475  | 29.316 | 3.122  | 1.00 | 21.26 |
|    | ATOM | 144 | CB  | PHE | A | 21 | 0 | -1.742 | 27.472 | 3.814  | 1.00 | 20.80 |

|    |      |     |     |     |   |    |   |        |        |        |      |       |
|----|------|-----|-----|-----|---|----|---|--------|--------|--------|------|-------|
|    | ATOM | 145 | CG  | PHE | A | 21 | 0 | -3.059 | 28.180 | 3.695  | 1.00 | 21.91 |
|    | ATOM | 146 | CD1 | PHE | A | 21 | 0 | -3.171 | 29.527 | 3.963  | 1.00 | 22.49 |
|    | ATOM | 147 | CD2 | PHE | A | 21 | 0 | -4.207 | 27.470 | 3.327  | 1.00 | 22.51 |
|    | ATOM | 148 | CE1 | PHE | A | 21 | 0 | -4.370 | 30.207 | 3.845  | 1.00 | 22.27 |
| 5  | ATOM | 149 | CE2 | PHE | A | 21 | 0 | -5.419 | 28.128 | 3.203  | 1.00 | 22.79 |
|    | ATOM | 150 | CZ  | PHE | A | 21 | 0 | -5.498 | 29.497 | 3.474  | 1.00 | 23.34 |
|    | ATOM | 151 | N   | THR | A | 22 | 0 | -0.638 | 29.514 | 1.225  | 1.00 | 20.20 |
|    | ATOM | 152 | CA  | THR | A | 22 | 0 | -0.143 | 30.850 | 0.977  | 1.00 | 21.36 |
|    | ATOM | 153 | C   | THR | A | 22 | 0 | -1.083 | 31.939 | 1.488  | 1.00 | 21.79 |
| 10 | ATOM | 154 | O   | THR | A | 22 | 0 | -2.271 | 31.952 | 1.162  | 1.00 | 21.19 |
|    | ATOM | 155 | CB  | THR | A | 22 | 0 | 0.045  | 31.012 | -0.553 | 1.00 | 21.46 |
|    | ATOM | 156 | OG1 | THR | A | 22 | 0 | 0.838  | 29.881 | -0.934 | 1.00 | 20.09 |
|    | ATOM | 157 | CG2 | THR | A | 22 | 0 | 0.693  | 32.353 | -0.891 | 1.00 | 20.94 |
|    | ATOM | 158 | N   | ARG | A | 23 | 0 | -0.562 | 32.871 | 2.257  | 1.00 | 20.80 |
| 15 | ATOM | 159 | CA  | ARG | A | 23 | 0 | -1.230 | 34.008 | 2.844  | 1.00 | 20.78 |
|    | ATOM | 160 | C   | ARG | A | 23 | 0 | -0.257 | 35.189 | 2.960  | 1.00 | 21.15 |
|    | ATOM | 161 | O   | ARG | A | 23 | 0 | 0.954  | 35.018 | 2.740  | 1.00 | 20.42 |
|    | ATOM | 162 | CB  | ARG | A | 23 | 0 | -1.874 | 33.685 | 4.172  | 1.00 | 20.47 |
|    | ATOM | 163 | CG  | ARG | A | 23 | 0 | -0.964 | 33.152 | 5.295  | 1.00 | 21.52 |
| 20 | ATOM | 164 | CD  | ARG | A | 23 | 0 | -0.552 | 34.357 | 6.113  | 1.00 | 22.75 |
|    | ATOM | 165 | NE  | ARG | A | 23 | 0 | -0.905 | 34.419 | 7.477  | 1.00 | 21.60 |
|    | ATOM | 166 | CZ  | ARG | A | 23 | 0 | -0.870 | 35.283 | 8.464  | 1.00 | 19.89 |
|    | ATOM | 167 | NH1 | ARG | A | 23 | 0 | -0.526 | 36.565 | 8.453  | 1.00 | 20.19 |
|    | ATOM | 168 | NH2 | ARG | A | 23 | 0 | -1.249 | 34.744 | 9.610  | 1.00 | 18.64 |
| 25 | ATOM | 169 | N   | ALA | A | 24 | 0 | -0.784 | 36.389 | 3.199  | 1.00 | 20.05 |
|    | ATOM | 170 | CA  | ALA | A | 24 | 0 | 0.140  | 37.541 | 3.243  | 1.00 | 22.03 |
|    | ATOM | 171 | C   | ALA | A | 24 | 0 | 0.786  | 37.561 | 4.635  | 1.00 | 21.09 |
|    | ATOM | 172 | O   | ALA | A | 24 | 0 | 0.200  | 37.124 | 5.637  | 1.00 | 21.16 |
|    | ATOM | 173 | CB  | ALA | A | 24 | 0 | -0.578 | 38.836 | 2.902  | 1.00 | 22.98 |
| 30 | ATOM | 174 | N   | GLY | A | 25 | 0 | 2.042  | 37.984 | 4.683  | 1.00 | 20.28 |
|    | ATOM | 175 | CA  | GLY | A | 25 | 0 | 2.786  | 37.993 | 5.950  | 1.00 | 20.29 |
|    | ATOM | 176 | C   | GLY | A | 25 | 0 | 3.649  | 39.254 | 5.979  | 1.00 | 21.38 |
|    | ATOM | 177 | O   | GLY | A | 25 | 0 | 3.465  | 40.229 | 5.238  | 1.00 | 21.06 |
|    | ATOM | 178 | N   | ILE | A | 26 | 0 | 4.604  | 39.221 | 6.897  | 1.00 | 20.33 |
| 35 | ATOM | 179 | CA  | ILE | A | 26 | 0 | 5.475  | 40.365 | 7.145  | 1.00 | 20.64 |
|    | ATOM | 180 | C   | ILE | A | 26 | 0 | 6.903  | 39.886 | 6.932  | 1.00 | 20.00 |
|    | ATOM | 181 | O   | ILE | A | 26 | 0 | 7.247  | 38.851 | 7.485  | 1.00 | 21.34 |
|    | ATOM | 182 | CB  | ILE | A | 26 | 0 | 5.278  | 40.933 | 8.564  | 1.00 | 20.38 |

|    |      |     |     |     |   |    |   |        |        |        |      |       |
|----|------|-----|-----|-----|---|----|---|--------|--------|--------|------|-------|
|    | ATOM | 183 | CG1 | ILE | A | 26 | 0 | 3.883  | 41.536 | 8.667  | 1.00 | 20.72 |
|    | ATOM | 184 | CG2 | ILE | A | 26 | 0 | 6.333  | 42.007 | 8.821  | 1.00 | 22.34 |
|    | ATOM | 185 | CD1 | ILE | A | 26 | 0 | 3.310  | 41.822 | 10.024 | 1.00 | 20.76 |
|    | ATOM | 186 | N   | LEU | A | 27 | 0 | 7.644  | 40.551 | 6.079  | 1.00 | 19.10 |
| 5  | ATOM | 187 | CA  | LEU | A | 27 | 0 | 9.005  | 40.168 | 5.739  | 1.00 | 19.67 |
|    | ATOM | 188 | C   | LEU | A | 27 | 0 | 9.964  | 41.226 | 6.280  | 1.00 | 19.85 |
|    | ATOM | 189 | O   | LEU | A | 27 | 0 | 9.591  | 42.407 | 6.356  | 1.00 | 19.19 |
|    | ATOM | 190 | CB  | LEU | A | 27 | 0 | 9.138  | 40.172 | 4.219  | 1.00 | 20.26 |
|    | ATOM | 191 | CG  | LEU | A | 27 | 0 | 9.046  | 38.883 | 3.415  | 1.00 | 22.65 |
| 10 | ATOM | 192 | CD1 | LEU | A | 27 | 0 | 8.127  | 37.835 | 3.989  | 1.00 | 21.10 |
|    | ATOM | 193 | CD2 | LEU | A | 27 | 0 | 8.738  | 39.198 | 1.963  | 1.00 | 22.01 |
|    | ATOM | 194 | N   | VAL | A | 28 | 0 | 11.162 | 40.804 | 6.630  | 1.00 | 18.03 |
|    | ATOM | 195 | CA  | VAL | A | 28 | 0 | 12.199 | 41.723 | 7.088  | 1.00 | 17.24 |
|    | ATOM | 196 | C   | VAL | A | 28 | 0 | 13.289 | 41.573 | 6.040  | 1.00 | 18.99 |
|    | ATOM | 197 | O   | VAL | A | 28 | 0 | 13.791 | 40.453 | 5.863  | 1.00 | 20.36 |
|    | ATOM | 198 | CB  | VAL | A | 28 | 0 | 12.762 | 41.415 | 8.491  | 1.00 | 16.50 |
|    | ATOM | 199 | CG1 | VAL | A | 28 | 0 | 13.899 | 42.361 | 8.845  | 1.00 | 15.41 |
|    | ATOM | 200 | CG2 | VAL | A | 28 | 0 | 11.681 | 41.517 | 9.558  | 1.00 | 15.42 |
|    | ATOM | 201 | N   | ASN | A | 29 | 0 | 13.575 | 42.601 | 5.256  | 1.00 | 20.78 |
| 20 | ATOM | 202 | CA  | ASN | A | 29 | 0 | 14.567 | 42.579 | 4.198  | 1.00 | 20.46 |
|    | ATOM | 203 | C   | ASN | A | 29 | 0 | 14.316 | 41.435 | 3.226  | 1.00 | 23.05 |
|    | ATOM | 204 | O   | ASN | A | 29 | 0 | 15.247 | 40.675 | 2.880  | 1.00 | 23.62 |
|    | ATOM | 205 | CB  | ASN | A | 29 | 0 | 15.982 | 42.446 | 4.764  | 1.00 | 21.06 |
|    | ATOM | 206 | CG  | ASN | A | 29 | 0 | 16.475 | 43.654 | 5.522  | 1.00 | 22.44 |
|    | ATOM | 207 | OD1 | ASN | A | 29 | 0 | 15.870 | 44.722 | 5.434  | 1.00 | 23.47 |
|    | ATOM | 208 | ND2 | ASN | A | 29 | 0 | 17.560 | 43.507 | 6.288  | 1.00 | 22.23 |
|    | ATOM | 209 | N   | GLY | A | 30 | 0 | 13.053 | 41.215 | 2.878  | 1.00 | 23.18 |
|    | ATOM | 210 | CA  | GLY | A | 30 | 0 | 12.662 | 40.181 | 1.922  | 1.00 | 23.36 |
|    | ATOM | 211 | C   | GLY | A | 30 | 0 | 12.723 | 38.757 | 2.436  | 1.00 | 23.85 |
| 30 | ATOM | 212 | O   | GLY | A | 30 | 0 | 12.707 | 37.814 | 1.633  | 1.00 | 25.17 |
|    | ATOM | 213 | N   | VAL | A | 31 | 0 | 12.832 | 38.585 | 3.755  | 1.00 | 21.85 |
|    | ATOM | 214 | CA  | VAL | A | 31 | 0 | 12.999 | 37.276 | 4.352  | 1.00 | 20.55 |
|    | ATOM | 215 | C   | VAL | A | 31 | 0 | 12.031 | 37.190 | 5.548  | 1.00 | 19.91 |
|    | ATOM | 216 | O   | VAL | A | 31 | 0 | 11.796 | 38.172 | 6.269  | 1.00 | 17.50 |
| 35 | ATOM | 217 | CB  | VAL | A | 31 | 0 | 14.436 | 37.020 | 4.856  | 1.00 | 21.36 |
|    | ATOM | 218 | CG1 | VAL | A | 31 | 0 | 14.556 | 35.709 | 5.626  | 1.00 | 20.79 |
|    | ATOM | 219 | CG2 | VAL | A | 31 | 0 | 15.495 | 37.005 | 3.757  | 1.00 | 21.84 |
|    | ATOM | 220 | N   | HIS | A | 32 | 0 | 11.489 | 35.984 | 5.698  | 1.00 | 17.05 |

|    |      |     |     |     |   |    |   |        |        |        |      |       |
|----|------|-----|-----|-----|---|----|---|--------|--------|--------|------|-------|
|    | ATOM | 221 | CA  | HIS | A | 32 | 0 | 10.592 | 35.729 | 6.797  | 1.00 | 18.61 |
|    | ATOM | 222 | C   | HIS | A | 32 | 0 | 11.417 | 35.499 | 8.050  | 1.00 | 17.67 |
|    | ATOM | 223 | O   | HIS | A | 32 | 0 | 11.873 | 34.385 | 8.216  | 1.00 | 18.72 |
|    | ATOM | 224 | CB  | HIS | A | 32 | 0 | 9.676  | 34.543 | 6.493  | 1.00 | 21.00 |
| 5  | ATOM | 225 | CG  | HIS | A | 32 | 0 | 8.639  | 34.208 | 7.517  | 1.00 | 23.80 |
|    | ATOM | 226 | ND1 | HIS | A | 32 | 0 | 7.744  | 33.174 | 7.332  | 1.00 | 25.14 |
|    | ATOM | 227 | CD2 | HIS | A | 32 | 0 | 8.331  | 34.720 | 8.735  | 1.00 | 25.32 |
|    | ATOM | 228 | CE1 | HIS | A | 32 | 0 | 6.942  | 33.061 | 8.385  | 1.00 | 25.36 |
|    | ATOM | 229 | NE2 | HIS | A | 32 | 0 | 7.271  | 33.986 | 9.260  | 1.00 | 26.23 |
| 10 | ATOM | 230 | N   | GLY | A | 33 | 0 | 11.522 | 36.446 | 8.960  | 1.00 | 16.23 |
|    | ATOM | 231 | CA  | GLY | A | 33 | 0 | 12.276 | 36.252 | 10.198 | 1.00 | 16.97 |
|    | ATOM | 232 | C   | GLY | A | 33 | 0 | 13.740 | 35.869 | 10.083 | 1.00 | 15.54 |
|    | ATOM | 233 | O   | GLY | A | 33 | 0 | 14.228 | 34.885 | 10.609 | 1.00 | 15.13 |
|    | ATOM | 234 | N   | PRO | A | 34 | 0 | 14.555 | 36.734 | 9.475  | 1.00 | 15.75 |
| 15 | ATOM | 235 | CA  | PRO | A | 34 | 0 | 16.012 | 36.561 | 9.359  | 1.00 | 14.70 |
|    | ATOM | 236 | C   | PRO | A | 34 | 0 | 16.734 | 36.660 | 10.701 | 1.00 | 14.02 |
|    | ATOM | 237 | O   | PRO | A | 34 | 0 | 16.241 | 37.252 | 11.673 | 1.00 | 10.44 |
|    | ATOM | 238 | CB  | PRO | A | 34 | 0 | 16.491 | 37.699 | 8.435  | 1.00 | 14.40 |
|    | ATOM | 239 | CG  | PRO | A | 34 | 0 | 15.441 | 38.742 | 8.783  | 1.00 | 15.11 |
| 20 | ATOM | 240 | CD  | PRO | A | 34 | 0 | 14.113 | 38.005 | 8.905  | 1.00 | 13.69 |
|    | ATOM | 241 | N   | LEU | A | 35 | 0 | 17.925 | 36.049 | 10.767 | 1.00 | 13.60 |
|    | ATOM | 242 | CA  | LEU | A | 35 | 0 | 18.748 | 36.022 | 11.963 | 1.00 | 14.35 |
|    | ATOM | 243 | C   | LEU | A | 35 | 0 | 19.462 | 37.359 | 12.161 | 1.00 | 16.25 |
|    | ATOM | 244 | O   | LEU | A | 35 | 0 | 20.015 | 37.902 | 11.210 | 1.00 | 14.10 |
| 25 | ATOM | 245 | CB  | LEU | A | 35 | 0 | 19.834 | 34.916 | 11.862 | 1.00 | 15.33 |
|    | ATOM | 246 | CG  | LEU | A | 35 | 0 | 20.958 | 34.943 | 12.911 | 1.00 | 17.74 |
|    | ATOM | 247 | CD1 | LEU | A | 35 | 0 | 20.486 | 34.698 | 14.348 | 1.00 | 16.30 |
|    | ATOM | 248 | CD2 | LEU | A | 35 | 0 | 22.052 | 33.934 | 12.575 | 1.00 | 16.60 |
|    | ATOM | 249 | N   | ILE | A | 36 | 0 | 19.471 | 37.855 | 13.384 | 1.00 | 16.71 |
| 30 | ATOM | 250 | CA  | ILE | A | 36 | 0 | 20.265 | 39.027 | 13.738 | 1.00 | 16.66 |
|    | ATOM | 251 | C   | ILE | A | 36 | 0 | 21.403 | 38.487 | 14.620 | 1.00 | 17.92 |
|    | ATOM | 252 | O   | ILE | A | 36 | 0 | 21.183 | 37.732 | 15.573 | 1.00 | 17.20 |
|    | ATOM | 253 | CB  | ILE | A | 36 | 0 | 19.560 | 40.129 | 14.533 | 1.00 | 16.60 |
|    | ATOM | 254 | CG1 | ILE | A | 36 | 0 | 18.389 | 40.771 | 13.771 | 1.00 | 16.09 |
| 35 | ATOM | 255 | CG2 | ILE | A | 36 | 0 | 20.565 | 41.226 | 14.917 | 1.00 | 17.67 |
|    | ATOM | 256 | CD1 | ILE | A | 36 | 0 | 17.590 | 41.754 | 14.629 | 1.00 | 15.88 |
|    | ATOM | 257 | N   | ARG | A | 37 | 0 | 22.647 | 38.829 | 14.288 | 1.00 | 18.72 |
|    | ATOM | 258 | CA  | ARG | A | 37 | 0 | 23.754 | 38.315 | 15.091 | 1.00 | 19.94 |



|    |      |     |     |     |   |    |   |        |        |        |      |       |
|----|------|-----|-----|-----|---|----|---|--------|--------|--------|------|-------|
|    | ATOM | 259 | C   | ARG | A | 37 | 0 | 24.839 | 39.369 | 15.280 | 1.00 | 20.08 |
|    | ATOM | 260 | O   | ARG | A | 37 | 0 | 24.979 | 40.249 | 14.450 | 1.00 | 20.52 |
|    | ATOM | 261 | CB  | ARG | A | 37 | 0 | 24.395 | 37.077 | 14.465 | 1.00 | 21.72 |
|    | ATOM | 262 | CG  | ARG | A | 37 | 0 | 25.102 | 37.393 | 13.171 | 1.00 | 24.46 |
| 5  | ATOM | 263 | CD  | ARG | A | 37 | 0 | 26.113 | 36.339 | 12.762 | 1.00 | 26.90 |
|    | ATOM | 264 | NE  | ARG | A | 37 | 0 | 26.584 | 36.571 | 11.381 | 1.00 | 29.30 |
|    | ATOM | 265 | CZ  | ARG | A | 37 | 0 | 26.838 | 35.571 | 10.528 | 1.00 | 31.29 |
|    | ATOM | 266 | NH1 | ARG | A | 37 | 0 | 26.711 | 34.283 | 10.851 | 1.00 | 31.37 |
|    | ATOM | 267 | NH2 | ARG | A | 37 | 0 | 27.252 | 35.827 | 9.291  | 1.00 | 31.66 |
| 10 | ATOM | 268 | N   | GLY | A | 38 | 0 | 25.587 | 39.223 | 16.361 | 1.00 | 20.22 |
|    | ATOM | 269 | CA  | GLY | A | 38 | 0 | 26.716 | 40.121 | 16.611 | 1.00 | 18.98 |
|    | ATOM | 270 | C   | GLY | A | 38 | 0 | 27.533 | 39.545 | 17.765 | 1.00 | 18.08 |
|    | ATOM | 271 | O   | GLY | A | 38 | 0 | 27.259 | 38.421 | 18.225 | 1.00 | 15.92 |
|    | ATOM | 272 | N   | GLY | A | 39 | 0 | 28.436 | 40.412 | 18.238 | 1.00 | 17.65 |
| 15 | ATOM | 273 | CA  | GLY | A | 39 | 0 | 29.322 | 40.026 | 19.351 | 1.00 | 16.23 |
|    | ATOM | 274 | C   | GLY | A | 39 | 0 | 28.861 | 40.774 | 20.592 | 1.00 | 17.21 |
|    | ATOM | 275 | O   | GLY | A | 39 | 0 | 28.157 | 41.784 | 20.489 | 1.00 | 17.27 |
|    | ATOM | 276 | N   | LYS | A | 40 | 0 | 29.276 | 40.328 | 21.764 | 1.00 | 16.58 |
|    | ATOM | 277 | CA  | LYS | A | 40 | 0 | 28.839 | 40.805 | 23.057 | 1.00 | 18.03 |
| 20 | ATOM | 278 | C   | LYS | A | 40 | 0 | 29.185 | 42.267 | 23.348 | 1.00 | 20.44 |
|    | ATOM | 279 | O   | LYS | A | 40 | 0 | 28.562 | 42.878 | 24.221 | 1.00 | 19.42 |
|    | ATOM | 280 | CB  | LYS | A | 40 | 0 | 29.394 | 39.933 | 24.185 | 1.00 | 16.74 |
|    | ATOM | 281 | CG  | LYS | A | 40 | 0 | 30.892 | 39.997 | 24.370 | 1.00 | 17.98 |
|    | ATOM | 282 | CD  | LYS | A | 40 | 0 | 31.333 | 39.170 | 25.569 | 1.00 | 20.66 |
|    | ATOM | 283 | CE  | LYS | A | 40 | 0 | 32.809 | 38.768 | 25.493 | 1.00 | 21.70 |
|    | ATOM | 284 | NZ  | LYS | A | 40 | 0 | 33.227 | 38.111 | 26.757 | 1.00 | 23.11 |
|    | ATOM | 285 | N   | ASN | A | 41 | 0 | 30.181 | 42.780 | 22.645 | 1.00 | 21.43 |
|    | ATOM | 286 | CA  | ASN | A | 41 | 0 | 30.536 | 44.171 | 22.840 | 1.00 | 25.14 |
|    | ATOM | 287 | C   | ASN | A | 41 | 0 | 30.092 | 44.976 | 21.644 | 1.00 | 24.05 |
| 30 | ATOM | 288 | O   | ASN | A | 41 | 0 | 30.409 | 46.161 | 21.655 | 1.00 | 25.66 |
|    | ATOM | 289 | CB  | ASN | A | 41 | 0 | 32.052 | 44.326 | 23.111 | 1.00 | 27.02 |
|    | ATOM | 290 | CG  | ASN | A | 41 | 0 | 32.434 | 43.606 | 24.404 | 1.00 | 29.76 |
|    | ATOM | 291 | OD1 | ASN | A | 41 | 0 | 33.398 | 42.832 | 24.431 | 1.00 | 31.54 |
|    | ATOM | 292 | ND2 | ASN | A | 41 | 0 | 31.663 | 43.825 | 25.473 | 1.00 | 30.13 |
| 35 | ATOM | 293 | N   | ASP | A | 42 | 0 | 29.424 | 44.447 | 20.631 | 1.00 | 23.80 |
|    | ATOM | 294 | CA  | ASP | A | 42 | 0 | 29.073 | 45.325 | 19.506 | 1.00 | 24.12 |
|    | ATOM | 295 | C   | ASP | A | 42 | 0 | 28.169 | 46.484 | 19.891 | 1.00 | 24.24 |
|    | ATOM | 296 | O   | ASP | A | 42 | 0 | 27.420 | 46.428 | 20.872 | 1.00 | 22.42 |

|    |      |     |     |     |   |    |   |        |        |        |      |       |
|----|------|-----|-----|-----|---|----|---|--------|--------|--------|------|-------|
|    | ATOM | 297 | CB  | ASP | A | 42 | 0 | 28.388 | 44.528 | 18.392 | 1.00 | 26.65 |
|    | ATOM | 298 | CG  | ASP | A | 42 | 0 | 29.404 | 43.599 | 17.773 | 1.00 | 28.94 |
|    | ATOM | 299 | OD1 | ASP | A | 42 | 0 | 30.603 | 43.754 | 18.056 | 1.00 | 31.45 |
|    | ATOM | 300 | OD2 | ASP | A | 42 | 0 | 29.026 | 42.708 | 17.009 | 1.00 | 31.69 |
| 5  | ATOM | 301 | N   | ASN | A | 43 | 0 | 28.258 | 47.547 | 19.090 | 1.00 | 24.72 |
|    | ATOM | 302 | CA  | ASN | A | 43 | 0 | 27.316 | 48.660 | 19.255 | 1.00 | 26.50 |
|    | ATOM | 303 | C   | ASN | A | 43 | 0 | 26.293 | 48.430 | 18.128 | 1.00 | 26.23 |
|    | ATOM | 304 | O   | ASN | A | 43 | 0 | 26.723 | 48.420 | 16.979 | 1.00 | 25.02 |
|    | ATOM | 305 | CB  | ASN | A | 43 | 0 | 27.934 | 50.047 | 19.128 | 1.00 | 28.45 |
| 10 | ATOM | 306 | CG  | ASN | A | 43 | 0 | 28.858 | 50.244 | 20.323 | 1.00 | 31.09 |
|    | ATOM | 307 | OD1 | ASN | A | 43 | 0 | 30.041 | 50.502 | 20.106 | 1.00 | 33.11 |
|    | ATOM | 308 | ND2 | ASN | A | 43 | 0 | 28.364 | 50.055 | 21.531 | 1.00 | 31.18 |
|    | ATOM | 309 | N   | PHE | A | 44 | 0 | 25.039 | 48.155 | 18.468 | 1.00 | 24.63 |
|    | ATOM | 310 | CA  | PHE | A | 44 | 0 | 24.083 | 47.897 | 17.393 | 1.00 | 23.28 |
| 15 | ATOM | 311 | C   | PHE | A | 44 | 0 | 23.450 | 49.191 | 16.916 | 1.00 | 22.36 |
| 16 | ATOM | 312 | O   | PHE | A | 44 | 0 | 23.024 | 50.008 | 17.735 | 1.00 | 21.07 |
| 17 | ATOM | 313 | CB  | PHE | A | 44 | 0 | 22.959 | 46.965 | 17.853 | 1.00 | 22.04 |
| 18 | ATOM | 314 | CG  | PHE | A | 44 | 0 | 23.376 | 45.525 | 17.955 | 1.00 | 22.96 |
| 19 | ATOM | 315 | CD1 | PHE | A | 44 | 0 | 22.779 | 44.562 | 17.153 | 1.00 | 23.91 |
| 20 | ATOM | 316 | CD2 | PHE | A | 44 | 0 | 24.330 | 45.120 | 18.869 | 1.00 | 22.03 |
| 21 | ATOM | 317 | CE1 | PHE | A | 44 | 0 | 23.131 | 43.230 | 17.253 | 1.00 | 24.42 |
| 22 | ATOM | 318 | CE2 | PHE | A | 44 | 0 | 24.689 | 43.797 | 18.974 | 1.00 | 23.25 |
| 23 | ATOM | 319 | CZ  | PHE | A | 44 | 0 | 24.095 | 42.837 | 18.168 | 1.00 | 24.02 |
| 24 | ATOM | 320 | N   | GLU | A | 45 | 0 | 23.350 | 49.343 | 15.604 | 1.00 | 22.78 |
| 25 | ATOM | 321 | CA  | GLU | A | 45 | 0 | 22.611 | 50.482 | 15.054 | 1.00 | 24.47 |
| 26 | ATOM | 322 | C   | GLU | A | 45 | 0 | 21.619 | 49.884 | 14.055 | 1.00 | 23.79 |
| 27 | ATOM | 323 | O   | GLU | A | 45 | 0 | 22.017 | 49.587 | 12.924 | 1.00 | 24.40 |
| 28 | ATOM | 324 | CB  | GLU | A | 45 | 0 | 23.543 | 51.473 | 14.368 | 1.00 | 27.07 |
| 29 | ATOM | 325 | CG  | GLU | A | 45 | 0 | 24.474 | 52.130 | 15.374 | 1.00 | 31.60 |
| 30 | ATOM | 326 | CD  | GLU | A | 45 | 0 | 25.380 | 53.179 | 14.772 | 1.00 | 33.90 |
|    | ATOM | 327 | OE1 | GLU | A | 45 | 0 | 25.354 | 53.438 | 13.559 | 1.00 | 35.62 |
|    | ATOM | 328 | OE2 | GLU | A | 45 | 0 | 26.155 | 53.748 | 15.565 | 1.00 | 36.42 |
|    | ATOM | 329 | N   | LEU | A | 46 | 0 | 20.369 | 49.684 | 14.465 | 1.00 | 22.18 |
|    | ATOM | 330 | CA  | LEU | A | 46 | 0 | 19.419 | 49.044 | 13.556 | 1.00 | 21.22 |
| 35 | ATOM | 331 | C   | LEU | A | 46 | 0 | 18.348 | 50.001 | 13.077 | 1.00 | 21.27 |
|    | ATOM | 332 | O   | LEU | A | 46 | 0 | 17.464 | 50.429 | 13.812 | 1.00 | 21.60 |
|    | ATOM | 333 | CB  | LEU | A | 46 | 0 | 18.837 | 47.811 | 14.262 | 1.00 | 20.72 |
|    | ATOM | 334 | CG  | LEU | A | 46 | 0 | 19.827 | 46.658 | 14.403 | 1.00 | 21.28 |

|    |      |     |     |     |   |    |   |        |        |        |      |       |
|----|------|-----|-----|-----|---|----|---|--------|--------|--------|------|-------|
|    | ATOM | 335 | CD1 | LEU | A | 46 | 0 | 19.334 | 45.621 | 15.397 | 1.00 | 20.83 |
|    | ATOM | 336 | CD2 | LEU | A | 46 | 0 | 20.148 | 46.034 | 13.052 | 1.00 | 18.33 |
|    | ATOM | 337 | N   | ASN | A | 47 | 0 | 18.438 | 50.403 | 11.823 | 1.00 | 21.09 |
|    | ATOM | 338 | CA  | ASN | A | 47 | 0 | 17.498 | 51.344 | 11.252 | 1.00 | 22.37 |
| 5  | ATOM | 339 | C   | ASN | A | 47 | 0 | 16.273 | 50.558 | 10.803 | 1.00 | 22.18 |
|    | ATOM | 340 | O   | ASN | A | 47 | 0 | 16.390 | 49.810 | 9.847  | 1.00 | 23.41 |
|    | ATOM | 341 | CB  | ASN | A | 47 | 0 | 18.131 | 52.104 | 10.066 | 1.00 | 24.01 |
|    | ATOM | 342 | CG  | ASN | A | 47 | 0 | 17.226 | 53.243 | 9.615  | 1.00 | 25.54 |
|    | ATOM | 343 | OD1 | ASN | A | 47 | 0 | 16.443 | 53.772 | 10.413 | 1.00 | 26.53 |
| 10 | ATOM | 344 | ND2 | ASN | A | 47 | 0 | 17.332 | 53.612 | 8.346  | 1.00 | 26.01 |
|    | ATOM | 345 | N   | VAL | A | 48 | 0 | 15.147 | 50.692 | 11.475 | 1.00 | 22.04 |
|    | ATOM | 346 | CA  | VAL | A | 48 | 0 | 13.918 | 49.995 | 11.140 | 1.00 | 21.99 |
|    | ATOM | 347 | C   | VAL | A | 48 | 0 | 13.026 | 50.879 | 10.269 | 1.00 | 21.82 |
|    | ATOM | 348 | O   | VAL | A | 48 | 0 | 12.532 | 51.910 | 10.699 | 1.00 | 20.61 |
| 15 | ATOM | 349 | CB  | VAL | A | 48 | 0 | 13.176 | 49.579 | 12.430 | 1.00 | 22.64 |
| 16 | ATOM | 350 | CG1 | VAL | A | 48 | 0 | 11.819 | 48.931 | 12.148 | 1.00 | 21.99 |
| 17 | ATOM | 351 | CG2 | VAL | A | 48 | 0 | 14.098 | 48.631 | 13.216 | 1.00 | 21.68 |
| 18 | ATOM | 352 | N   | VAL | A | 49 | 0 | 12.931 | 50.512 | 9.009  | 1.00 | 21.79 |
| 19 | ATOM | 353 | CA  | VAL | A | 49 | 0 | 12.164 | 51.167 | 7.966  | 1.00 | 21.34 |
| 20 | ATOM | 354 | C   | VAL | A | 49 | 0 | 10.816 | 50.460 | 7.795  | 1.00 | 21.12 |
| 21 | ATOM | 355 | O   | VAL | A | 49 | 0 | 10.703 | 49.308 | 7.365  | 1.00 | 19.76 |
| 22 | ATOM | 356 | CB  | VAL | A | 49 | 0 | 12.983 | 51.189 | 6.665  | 1.00 | 22.02 |
| 23 | ATOM | 357 | CG1 | VAL | A | 49 | 0 | 12.267 | 51.913 | 5.519  | 1.00 | 21.70 |
| 24 | ATOM | 358 | CG2 | VAL | A | 49 | 0 | 14.312 | 51.933 | 6.906  | 1.00 | 21.47 |
| 25 | ATOM | 359 | N   | ASN | A | 50 | 0 | 9.767  | 51.112 | 8.257  | 1.00 | 20.26 |
| 26 | ATOM | 360 | CA  | ASN | A | 50 | 0 | 8.424  | 50.611 | 8.215  | 1.00 | 22.70 |
| 27 | ATOM | 361 | C   | ASN | A | 50 | 0 | 7.751  | 50.899 | 6.869  | 1.00 | 25.99 |
| 28 | ATOM | 362 | O   | ASN | A | 50 | 0 | 7.043  | 51.925 | 6.735  | 1.00 | 27.06 |
| 29 | ATOM | 363 | CB  | ASN | A | 50 | 0 | 7.549  | 51.230 | 9.318  | 1.00 | 21.92 |
| 30 | ATOM | 364 | CG  | ASN | A | 50 | 0 | 6.198  | 50.569 | 9.471  | 1.00 | 22.44 |
|    | ATOM | 365 | OD1 | ASN | A | 50 | 0 | 5.818  | 49.801 | 8.572  | 1.00 | 24.19 |
|    | ATOM | 366 | ND2 | ASN | A | 50 | 0 | 5.435  | 50.833 | 10.526 | 1.00 | 20.19 |
|    | ATOM | 367 | N   | ASP | A | 51 | 0 | 7.915  | 49.959 | 5.926  | 1.00 | 26.42 |
|    | ATOM | 368 | CA  | ASP | A | 51 | 0 | 7.208  | 50.071 | 4.641  | 1.00 | 26.35 |
| 35 | ATOM | 369 | C   | ASP | A | 51 | 0 | 5.951  | 49.200 | 4.600  | 1.00 | 24.86 |
|    | ATOM | 370 | O   | ASP | A | 51 | 0 | 5.542  | 48.810 | 3.511  | 1.00 | 25.19 |
|    | ATOM | 371 | CB  | ASP | A | 51 | 0 | 8.126  | 49.698 | 3.481  | 1.00 | 26.75 |
|    | ATOM | 372 | CG  | ASP | A | 51 | 0 | 9.152  | 50.761 | 3.158  | 1.00 | 29.77 |

|    |      |     |     |     |   |    |   |        |        |       |      |       |
|----|------|-----|-----|-----|---|----|---|--------|--------|-------|------|-------|
|    | ATOM | 373 | OD1 | ASP | A | 51 | 0 | 8.944  | 51.904 | 3.617 | 1.00 | 31.03 |
|    | ATOM | 374 | OD2 | ASP | A | 51 | 0 | 10.166 | 50.509 | 2.465 | 1.00 | 30.42 |
|    | ATOM | 375 | N   | LEU | A | 52 | 0 | 5.332  | 48.801 | 5.700 | 1.00 | 25.05 |
|    | ATOM | 376 | CA  | LEU | A | 52 | 0 | 4.172  | 47.911 | 5.640 | 1.00 | 25.44 |
| 5  | ATOM | 377 | C   | LEU | A | 52 | 0 | 2.934  | 48.624 | 5.094 | 1.00 | 26.65 |
|    | ATOM | 378 | O   | LEU | A | 52 | 0 | 2.553  | 49.696 | 5.586 | 1.00 | 24.56 |
|    | ATOM | 379 | CB  | LEU | A | 52 | 0 | 3.837  | 47.374 | 7.029 | 1.00 | 24.19 |
|    | ATOM | 380 | CG  | LEU | A | 52 | 0 | 4.896  | 46.503 | 7.699 | 1.00 | 24.60 |
|    | ATOM | 381 | CD1 | LEU | A | 52 | 0 | 4.611  | 46.424 | 9.196 | 1.00 | 24.05 |
| 10 | ATOM | 382 | CD2 | LEU | A | 52 | 0 | 4.891  | 45.119 | 7.061 | 1.00 | 23.49 |
|    | ATOM | 383 | N   | ASP | A | 53 | 0 | 2.242  | 47.980 | 4.169 | 1.00 | 28.79 |
|    | ATOM | 384 | CA  | ASP | A | 53 | 0 | 1.049  | 48.602 | 3.581 | 1.00 | 29.91 |
|    | ATOM | 385 | C   | ASP | A | 53 | 0 | -0.135 | 47.658 | 3.492 | 1.00 | 29.90 |
|    | ATOM | 386 | O   | ASP | A | 53 | 0 | -1.152 | 48.082 | 2.951 | 1.00 | 30.40 |
| 15 | ATOM | 387 | CB  | ASP | A | 53 | 0 | 1.367  | 49.190 | 2.197 | 1.00 | 29.26 |
| 16 | ATOM | 388 | CG  | ASP | A | 53 | 0 | 1.838  | 48.140 | 1.218 | 1.00 | 31.28 |
| 17 | ATOM | 389 | OD1 | ASP | A | 53 | 0 | 1.865  | 46.926 | 1.540 | 1.00 | 31.64 |
| 18 | ATOM | 390 | OD2 | ASP | A | 53 | 0 | 2.233  | 48.474 | 0.074 | 1.00 | 32.42 |
| 19 | ATOM | 391 | N   | ASN | A | 54 | 0 | -0.060 | 46.437 | 4.014 | 1.00 | 29.44 |
| 20 | ATOM | 392 | CA  | ASN | A | 54 | 0 | -1.237 | 45.554 | 3.983 | 1.00 | 26.89 |
| 21 | ATOM | 393 | C   | ASN | A | 54 | 0 | -2.089 | 45.832 | 5.192 | 1.00 | 27.37 |
| 22 | ATOM | 394 | O   | ASN | A | 54 | 0 | -1.772 | 45.528 | 6.350 | 1.00 | 27.99 |
| 23 | ATOM | 395 | CB  | ASN | A | 54 | 0 | -0.831 | 44.095 | 3.913 | 1.00 | 25.11 |
| 24 | ATOM | 396 | CG  | ASN | A | 54 | 0 | -1.978 | 43.141 | 3.690 | 1.00 | 24.20 |
| 25 | ATOM | 397 | OD1 | ASN | A | 54 | 0 | -1.874 | 42.344 | 2.746 | 1.00 | 25.13 |
| 26 | ATOM | 398 | ND2 | ASN | A | 54 | 0 | -3.030 | 43.182 | 4.481 | 1.00 | 23.26 |
| 27 | ATOM | 399 | N   | PRO | A | 55 | 0 | -3.337 | 46.256 | 4.961 | 1.00 | 28.44 |
| 28 | ATOM | 400 | CA  | PRO | A | 55 | 0 | -4.286 | 46.589 | 6.014 | 1.00 | 26.57 |
| 29 | ATOM | 401 | C   | PRO | A | 55 | 0 | -4.909 | 45.414 | 6.723 | 1.00 | 27.10 |
| 30 | ATOM | 402 | O   | PRO | A | 55 | 0 | -5.671 | 45.624 | 7.687 | 1.00 | 26.05 |
|    | ATOM | 403 | CB  | PRO | A | 55 | 0 | -5.368 | 47.465 | 5.334 | 1.00 | 28.18 |
|    | ATOM | 404 | CG  | PRO | A | 55 | 0 | -5.249 | 47.049 | 3.899 | 1.00 | 27.50 |
|    | ATOM | 405 | CD  | PRO | A | 55 | 0 | -3.844 | 46.564 | 3.625 | 1.00 | 27.56 |
|    | ATOM | 406 | N   | THR | A | 56 | 0 | -4.603 | 44.160 | 6.345 | 1.00 | 25.55 |
| 35 | ATOM | 407 | CA  | THR | A | 56 | 0 | -5.214 | 43.024 | 7.065 | 1.00 | 25.52 |
|    | ATOM | 408 | C   | THR | A | 56 | 0 | -4.446 | 42.647 | 8.326 | 1.00 | 24.87 |
|    | ATOM | 409 | O   | THR | A | 56 | 0 | -4.766 | 41.764 | 9.115 | 1.00 | 23.97 |
|    | ATOM | 410 | CB  | THR | A | 56 | 0 | -5.393 | 41.807 | 6.154 | 1.00 | 25.10 |

|    |      |     |     |     |   |    |   |        |        |        |      |       |
|----|------|-----|-----|-----|---|----|---|--------|--------|--------|------|-------|
|    | ATOM | 411 | OG1 | THR | A | 56 | 0 | -4.100 | 41.345 | 5.763  | 1.00 | 24.26 |
|    | ATOM | 412 | CG2 | THR | A | 56 | 0 | -6.178 | 42.123 | 4.861  | 1.00 | 25.63 |
|    | ATOM | 413 | N   | MET | A | 57 | 0 | -3.317 | 43.311 | 8.558  | 1.00 | 26.01 |
|    | ATOM | 414 | CA  | MET | A | 57 | 0 | -2.553 | 43.099 | 9.801  | 1.00 | 26.57 |
| 5  | ATOM | 415 | C   | MET | A | 57 | 0 | -2.026 | 44.475 | 10.201 | 1.00 | 25.88 |
|    | ATOM | 416 | O   | MET | A | 57 | 0 | -2.026 | 45.416 | 9.397  | 1.00 | 25.18 |
|    | ATOM | 417 | CB  | MET | A | 57 | 0 | -1.561 | 41.939 | 9.698  | 1.00 | 25.42 |
|    | ATOM | 418 | CG  | MET | A | 57 | 0 | -0.639 | 41.868 | 8.554  | 1.00 | 24.37 |
|    | ATOM | 419 | SD  | MET | A | 57 | 0 | -0.034 | 40.288 | 7.916  | 1.00 | 22.34 |
| 10 | ATOM | 420 | CE  | MET | A | 57 | 0 | -0.275 | 40.640 | 6.167  | 1.00 | 19.23 |
|    | ATOM | 421 | N   | LEU | A | 58 | 0 | -1.694 | 44.601 | 11.476 | 1.00 | 25.98 |
|    | ATOM | 422 | CA  | LEU | A | 58 | 0 | -1.180 | 45.850 | 12.036 | 1.00 | 25.57 |
|    | ATOM | 423 | C   | LEU | A | 58 | 0 | -0.053 | 46.425 | 11.195 | 1.00 | 24.52 |
|    | ATOM | 424 | O   | LEU | A | 58 | 0 | 0.824  | 45.739 | 10.638 | 1.00 | 23.63 |
| 15 | ATOM | 425 | CB  | LEU | A | 58 | 0 | -0.757 | 45.535 | 13.463 | 1.00 | 26.67 |
| 16 | ATOM | 426 | CG  | LEU | A | 58 | 0 | -1.628 | 45.817 | 14.657 | 1.00 | 28.97 |
| 17 | ATOM | 427 | CD1 | LEU | A | 58 | 0 | -3.107 | 45.995 | 14.312 | 1.00 | 30.99 |
| 18 | ATOM | 428 | CD2 | LEU | A | 58 | 0 | -1.488 | 44.756 | 15.736 | 1.00 | 28.36 |
| 19 | ATOM | 429 | N   | ARG | A | 59 | 0 | -0.078 | 47.741 | 11.030 | 1.00 | 24.96 |
| 20 | ATOM | 430 | CA  | ARG | A | 59 | 0 | 0.918  | 48.434 | 10.231 | 1.00 | 26.92 |
| 21 | ATOM | 431 | C   | ARG | A | 59 | 0 | 1.932  | 49.229 | 11.014 | 1.00 | 26.31 |
| 22 | ATOM | 432 | O   | ARG | A | 59 | 0 | 3.120  | 49.198 | 10.699 | 1.00 | 28.82 |
| 23 | ATOM | 433 | CB  | ARG | A | 59 | 0 | 0.260  | 49.277 | 9.132  | 1.00 | 28.35 |
| 24 | ATOM | 434 | CG  | ARG | A | 59 | 0 | -0.252 | 48.385 | 7.986  | 1.00 | 29.50 |
| 25 | ATOM | 435 | CD  | ARG | A | 59 | 0 | -0.986 | 49.274 | 6.996  | 1.00 | 30.33 |
| 26 | ATOM | 436 | NE  | ARG | A | 59 | 0 | -2.333 | 49.604 | 7.459  | 1.00 | 32.26 |
| 27 | ATOM | 437 | CZ  | ARG | A | 59 | 0 | -3.121 | 50.525 | 6.883  | 1.00 | 33.24 |
| 28 | ATOM | 438 | NH1 | ARG | A | 59 | 0 | -2.679 | 51.233 | 5.845  | 1.00 | 32.27 |
| 29 | ATOM | 439 | NH2 | ARG | A | 59 | 0 | -4.340 | 50.712 | 7.389  | 1.00 | 32.65 |
| 30 | ATOM | 440 | N   | PRO | A | 60 | 0 | 1.542  | 49.961 | 12.020 | 1.00 | 26.30 |
|    | ATOM | 441 | CA  | PRO | A | 60 | 0 | 2.460  | 50.669 | 12.916 | 1.00 | 26.19 |
|    | ATOM | 442 | C   | PRO | A | 60 | 0 | 3.312  | 49.591 | 13.595 | 1.00 | 25.29 |
|    | ATOM | 443 | O   | PRO | A | 60 | 0 | 2.879  | 48.432 | 13.668 | 1.00 | 24.63 |
|    | ATOM | 444 | CB  | PRO | A | 60 | 0 | 1.623  | 51.464 | 13.925 | 1.00 | 25.93 |
| 35 | ATOM | 445 | CG  | PRO | A | 60 | 0 | 0.235  | 51.357 | 13.325 | 1.00 | 26.19 |
|    | ATOM | 446 | CD  | PRO | A | 60 | 0 | 0.165  | 50.073 | 12.508 | 1.00 | 26.23 |
|    | ATOM | 447 | N   | THR | A | 61 | 0 | 4.544  | 49.932 | 13.976 | 1.00 | 24.60 |
|    | ATOM | 448 | CA  | THR | A | 61 | 0 | 5.365  | 48.871 | 14.587 | 1.00 | 23.49 |

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|      |     |     |     |   |    |   |        |        |        |      |       |
|------|-----|-----|-----|---|----|---|--------|--------|--------|------|-------|
| ATOM | 449 | C   | THR | A | 61 | 0 | 6.204  | 49.400 | 15.743 | 1.00 | 22.83 |
| ATOM | 450 | O   | THR | A | 61 | 0 | 6.390  | 50.601 | 15.921 | 1.00 | 20.77 |
| ATOM | 451 | CB  | THR | A | 61 | 0 | 6.245  | 48.170 | 13.535 | 1.00 | 22.69 |
| ATOM | 452 | OG1 | THR | A | 61 | 0 | 6.668  | 46.918 | 14.096 | 1.00 | 23.55 |
| ATOM | 453 | CG2 | THR | A | 61 | 0 | 7.444  | 48.976 | 13.119 | 1.00 | 20.92 |
| ATOM | 454 | N   | SER | A | 62 | 0 | 6.702  | 48.449 | 16.507 | 1.00 | 22.38 |
| ATOM | 455 | CA  | SER | A | 62 | 0 | 7.599  | 48.672 | 17.633 | 1.00 | 22.47 |
| ATOM | 456 | C   | SER | A | 62 | 0 | 8.381  | 47.380 | 17.893 | 1.00 | 22.12 |
| ATOM | 457 | O   | SER | A | 62 | 0 | 7.763  | 46.331 | 18.124 | 1.00 | 20.53 |
| ATOM | 458 | CB  | SER | A | 62 | 0 | 6.784  | 49.033 | 18.882 | 1.00 | 22.02 |
| ATOM | 459 | OG  | SER | A | 62 | 0 | 7.666  | 49.570 | 19.832 | 1.00 | 21.19 |
| ATOM | 460 | N   | ILE | A | 63 | 0 | 9.716  | 47.451 | 17.806 | 1.00 | 21.17 |
| ATOM | 461 | CA  | ILE | A | 63 | 0 | 10.513 | 46.240 | 17.960 | 1.00 | 18.32 |
| ATOM | 462 | C   | ILE | A | 63 | 0 | 11.095 | 46.034 | 19.354 | 1.00 | 18.28 |
| ATOM | 463 | O   | ILE | A | 63 | 0 | 11.832 | 46.909 | 19.826 | 1.00 | 19.63 |
| ATOM | 464 | CB  | ILE | A | 63 | 0 | 11.642 | 46.234 | 16.924 | 1.00 | 16.68 |
| ATOM | 465 | CG1 | ILE | A | 63 | 0 | 11.166 | 46.509 | 15.508 | 1.00 | 18.51 |
| ATOM | 466 | CG2 | ILE | A | 63 | 0 | 12.319 | 44.848 | 16.906 | 1.00 | 16.78 |
| ATOM | 467 | CD1 | ILE | A | 63 | 0 | 10.055 | 45.625 | 14.994 | 1.00 | 18.25 |
| ATOM | 468 | N   | HIS | A | 64 | 0 | 10.880 | 44.890 | 19.985 | 1.00 | 15.18 |
| ATOM | 469 | CA  | HIS | A | 64 | 0 | 11.478 | 44.539 | 21.261 | 1.00 | 15.51 |
| ATOM | 470 | C   | HIS | A | 64 | 0 | 12.648 | 43.559 | 21.029 | 1.00 | 16.73 |
| ATOM | 471 | O   | HIS | A | 64 | 0 | 12.491 | 42.591 | 20.279 | 1.00 | 16.85 |
| ATOM | 472 | CB  | HIS | A | 64 | 0 | 10.512 | 43.912 | 22.239 | 1.00 | 14.37 |
| ATOM | 473 | CG  | HIS | A | 64 | 0 | 11.033 | 43.420 | 23.546 | 1.00 | 14.47 |
| ATOM | 474 | ND1 | HIS | A | 64 | 0 | 11.763 | 44.191 | 24.410 | 1.00 | 12.89 |
| ATOM | 475 | CD2 | HIS | A | 64 | 0 | 10.883 | 42.223 | 24.193 | 1.00 | 14.85 |
| ATOM | 476 | CE1 | HIS | A | 64 | 0 | 12.067 | 43.518 | 25.498 | 1.00 | 11.53 |
| ATOM | 477 | NE2 | HIS | A | 64 | 0 | 11.547 | 42.325 | 25.423 | 1.00 | 13.63 |
| ATOM | 478 | N   | TRP | A | 65 | 0 | 13.761 | 43.781 | 21.723 | 1.00 | 14.37 |
| ATOM | 479 | CA  | TRP | A | 65 | 0 | 14.966 | 42.926 | 21.577 | 1.00 | 13.92 |
| ATOM | 480 | C   | TRP | A | 65 | 0 | 14.987 | 42.084 | 22.840 | 1.00 | 13.50 |
| ATOM | 481 | O   | TRP | A | 65 | 0 | 15.482 | 42.538 | 23.901 | 1.00 | 12.84 |
| ATOM | 482 | CB  | TRP | A | 65 | 0 | 16.189 | 43.825 | 21.371 | 1.00 | 13.50 |
| ATOM | 483 | CG  | TRP | A | 65 | 0 | 15.890 | 45.020 | 20.492 | 1.00 | 13.19 |
| ATOM | 484 | CD1 | TRP | A | 65 | 0 | 15.453 | 46.247 | 20.913 | 1.00 | 12.42 |
| ATOM | 485 | CD2 | TRP | A | 65 | 0 | 15.908 | 45.087 | 19.068 | 1.00 | 13.61 |
| ATOM | 486 | NE1 | TRP | A | 65 | 0 | 15.234 | 47.067 | 19.862 | 1.00 | 11.49 |

|    |      |     |     |     |   |    |   |        |        |        |      |       |
|----|------|-----|-----|-----|---|----|---|--------|--------|--------|------|-------|
|    | ATOM | 487 | CE2 | TRP | A | 65 | 0 | 15.511 | 46.390 | 18.710 | 1.00 | 13.77 |
|    | ATOM | 488 | CE3 | TRP | A | 65 | 0 | 16.251 | 44.174 | 18.061 | 1.00 | 14.35 |
|    | ATOM | 489 | CZ2 | TRP | A | 65 | 0 | 15.439 | 46.815 | 17.378 | 1.00 | 14.99 |
|    | ATOM | 490 | CZ3 | TRP | A | 65 | 0 | 16.169 | 44.572 | 16.735 | 1.00 | 13.99 |
| 5  | ATOM | 491 | CH2 | TRP | A | 65 | 0 | 15.756 | 45.869 | 16.411 | 1.00 | 15.82 |
|    | ATOM | 492 | N   | HIS | A | 66 | 0 | 14.295 | 40.941 | 22.747 | 1.00 | 10.39 |
|    | ATOM | 493 | CA  | HIS | A | 66 | 0 | 13.939 | 40.200 | 23.966 | 1.00 | 12.00 |
|    | ATOM | 494 | C   | HIS | A | 66 | 0 | 15.158 | 39.653 | 24.698 | 1.00 | 11.34 |
|    | ATOM | 495 | O   | HIS | A | 66 | 0 | 15.889 | 38.859 | 24.130 | 1.00 | 11.51 |
| 10 | ATOM | 496 | CB  | HIS | A | 66 | 0 | 12.923 | 39.069 | 23.629 | 1.00 | 10.76 |
|    | ATOM | 497 | CG  | HIS | A | 66 | 0 | 12.418 | 38.308 | 24.808 | 1.00 | 11.26 |
|    | ATOM | 498 | ND1 | HIS | A | 66 | 0 | 11.106 | 38.085 | 25.092 | 1.00 | 13.10 |
|    | ATOM | 499 | CD2 | HIS | A | 66 | 0 | 13.050 | 37.676 | 25.824 | 1.00 | 13.49 |
|    | ATOM | 500 | CE1 | HIS | A | 66 | 0 | 10.919 | 37.407 | 26.191 | 1.00 | 12.50 |
| 15 | ATOM | 501 | NE2 | HIS | A | 66 | 0 | 12.116 | 37.146 | 26.683 | 1.00 | 13.71 |
| 15 | ATOM | 502 | N   | GLY | A | 67 | 0 | 15.345 | 39.971 | 25.948 | 1.00 | 12.84 |
| 15 | ATOM | 503 | CA  | GLY | A | 67 | 0 | 16.492 | 39.469 | 26.719 | 1.00 | 13.36 |
| 15 | ATOM | 504 | C   | GLY | A | 67 | 0 | 17.596 | 40.500 | 26.914 | 1.00 | 13.11 |
| 15 | ATOM | 505 | O   | GLY | A | 67 | 0 | 18.435 | 40.289 | 27.788 | 1.00 | 13.36 |
| 20 | ATOM | 506 | N   | LEU | A | 68 | 0 | 17.641 | 41.558 | 26.131 | 1.00 | 12.89 |
| 20 | ATOM | 507 | CA  | LEU | A | 68 | 0 | 18.659 | 42.598 | 26.300 | 1.00 | 15.22 |
| 20 | ATOM | 508 | C   | LEU | A | 68 | 0 | 18.235 | 43.501 | 27.448 | 1.00 | 16.14 |
| 20 | ATOM | 509 | O   | LEU | A | 68 | 0 | 17.029 | 43.842 | 27.505 | 1.00 | 16.50 |
| 25 | ATOM | 510 | CB  | LEU | A | 68 | 0 | 18.929 | 43.320 | 24.988 | 1.00 | 15.98 |
| 25 | ATOM | 511 | CG  | LEU | A | 68 | 0 | 20.002 | 42.638 | 24.114 | 1.00 | 19.57 |
|    | ATOM | 512 | CD1 | LEU | A | 68 | 0 | 19.719 | 41.185 | 23.809 | 1.00 | 20.39 |
|    | ATOM | 513 | CD2 | LEU | A | 68 | 0 | 20.188 | 43.316 | 22.758 | 1.00 | 19.59 |
|    | ATOM | 514 | N   | PHE | A | 69 | 0 | 19.125 | 43.848 | 28.386 | 1.00 | 13.24 |
|    | ATOM | 515 | CA  | PHE | A | 69 | 0 | 18.700 | 44.657 | 29.526 | 1.00 | 13.85 |
| 30 | ATOM | 516 | C   | PHE | A | 69 | 0 | 18.499 | 46.128 | 29.205 | 1.00 | 14.34 |
|    | ATOM | 517 | O   | PHE | A | 69 | 0 | 17.806 | 46.879 | 29.895 | 1.00 | 15.02 |
|    | ATOM | 518 | CB  | PHE | A | 69 | 0 | 19.770 | 44.579 | 30.637 | 1.00 | 16.02 |
|    | ATOM | 519 | CG  | PHE | A | 69 | 0 | 20.112 | 43.187 | 31.072 | 1.00 | 16.45 |
|    | ATOM | 520 | CD1 | PHE | A | 69 | 0 | 19.172 | 42.162 | 31.026 | 1.00 | 16.68 |
| 35 | ATOM | 521 | CD2 | PHE | A | 69 | 0 | 21.381 | 42.927 | 31.578 | 1.00 | 16.78 |
|    | ATOM | 522 | CE1 | PHE | A | 69 | 0 | 19.504 | 40.883 | 31.448 | 1.00 | 18.86 |
|    | ATOM | 523 | CE2 | PHE | A | 69 | 0 | 21.717 | 41.652 | 32.001 | 1.00 | 17.34 |
|    | ATOM | 524 | CZ  | PHE | A | 69 | 0 | 20.782 | 40.628 | 31.932 | 1.00 | 18.09 |

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|    |      |     |     |     |   |    |   |        |        |        |      |       |
|----|------|-----|-----|-----|---|----|---|--------|--------|--------|------|-------|
|    | ATOM | 525 | N   | GLN | A | 70 | 0 | 19.081 | 46.611 | 28.130 | 1.00 | 12.22 |
|    | ATOM | 526 | CA  | GLN | A | 70 | 0 | 18.919 | 47.990 | 27.708 | 1.00 | 15.20 |
|    | ATOM | 527 | C   | GLN | A | 70 | 0 | 19.242 | 49.004 | 28.799 | 1.00 | 16.76 |
|    | ATOM | 528 | O   | GLN | A | 70 | 0 | 18.555 | 50.016 | 28.919 | 1.00 | 16.08 |
| 5  | ATOM | 529 | CB  | GLN | A | 70 | 0 | 17.488 | 48.115 | 27.232 | 1.00 | 15.52 |
|    | ATOM | 530 | CG  | GLN | A | 70 | 0 | 17.168 | 47.303 | 26.003 | 1.00 | 17.37 |
|    | ATOM | 531 | CD  | GLN | A | 70 | 0 | 17.781 | 47.744 | 24.709 | 1.00 | 17.70 |
|    | ATOM | 532 | OE1 | GLN | A | 70 | 0 | 17.557 | 47.090 | 23.676 | 1.00 | 21.63 |
|    | ATOM | 533 | NE2 | GLN | A | 70 | 0 | 18.549 | 48.805 | 24.620 | 1.00 | 16.79 |
| 10 | ATOM | 534 | N   | ARG | A | 71 | 0 | 20.338 | 48.804 | 29.518 | 1.00 | 16.49 |
|    | ATOM | 535 | CA  | ARG | A | 71 | 0 | 20.765 | 49.712 | 30.588 | 1.00 | 18.41 |
|    | ATOM | 536 | C   | ARG | A | 71 | 0 | 21.239 | 51.011 | 29.970 | 1.00 | 16.23 |
|    | ATOM | 537 | O   | ARG | A | 71 | 0 | 22.059 | 50.998 | 29.027 | 1.00 | 14.48 |
|    | ATOM | 538 | CB  | ARG | A | 71 | 0 | 21.827 | 48.942 | 31.382 | 1.00 | 22.65 |
|    | ATOM | 539 | CG  | ARG | A | 71 | 0 | 22.273 | 49.589 | 32.671 | 1.00 | 29.50 |
|    | ATOM | 540 | CD  | ARG | A | 71 | 0 | 23.286 | 48.756 | 33.457 | 1.00 | 32.92 |
|    | ATOM | 541 | NE  | ARG | A | 71 | 0 | 22.712 | 47.550 | 34.035 | 1.00 | 38.11 |
|    | ATOM | 542 | CZ  | ARG | A | 71 | 0 | 22.551 | 46.358 | 33.452 | 1.00 | 40.14 |
|    | ATOM | 543 | NH1 | ARG | A | 71 | 0 | 22.939 | 46.138 | 32.190 | 1.00 | 41.23 |
| 20 | ATOM | 544 | NH2 | ARG | A | 71 | 0 | 22.022 | 45.333 | 34.130 | 1.00 | 40.89 |
|    | ATOM | 545 | N   | GLY | A | 72 | 0 | 20.613 | 52.145 | 30.311 | 1.00 | 14.82 |
|    | ATOM | 546 | CA  | GLY | A | 72 | 0 | 20.981 | 53.414 | 29.676 | 1.00 | 14.51 |
|    | ATOM | 547 | C   | GLY | A | 72 | 0 | 20.268 | 53.606 | 28.338 | 1.00 | 15.55 |
|    | ATOM | 548 | O   | GLY | A | 72 | 0 | 20.401 | 54.706 | 27.777 | 1.00 | 16.32 |
|    | ATOM | 549 | N   | THR | A | 73 | 0 | 19.503 | 52.651 | 27.804 | 1.00 | 12.12 |
|    | ATOM | 550 | CA  | THR | A | 73 | 0 | 18.857 | 52.781 | 26.516 | 1.00 | 12.50 |
|    | ATOM | 551 | C   | THR | A | 73 | 0 | 17.418 | 52.252 | 26.621 | 1.00 | 13.98 |
|    | ATOM | 552 | O   | THR | A | 73 | 0 | 16.890 | 51.534 | 25.776 | 1.00 | 13.81 |
|    | ATOM | 553 | CB  | THR | A | 73 | 0 | 19.577 | 52.086 | 25.346 | 1.00 | 12.21 |
| 30 | ATOM | 554 | OG1 | THR | A | 73 | 0 | 19.854 | 50.711 | 25.666 | 1.00 | 12.83 |
|    | ATOM | 555 | CG2 | THR | A | 73 | 0 | 20.944 | 52.711 | 25.000 | 1.00 | 9.81  |
|    | ATOM | 556 | N   | ASN | A | 74 | 0 | 16.744 | 52.617 | 27.708 | 1.00 | 12.97 |
|    | ATOM | 557 | CA  | ASN | A | 74 | 0 | 15.354 | 52.273 | 27.951 | 1.00 | 14.93 |
|    | ATOM | 558 | C   | ASN | A | 74 | 0 | 14.469 | 52.718 | 26.784 | 1.00 | 15.92 |
| 35 | ATOM | 559 | O   | ASN | A | 74 | 0 | 13.501 | 52.030 | 26.455 | 1.00 | 16.56 |
|    | ATOM | 560 | CB  | ASN | A | 74 | 0 | 14.851 | 52.821 | 29.271 | 1.00 | 13.06 |
|    | ATOM | 561 | CG  | ASN | A | 74 | 0 | 13.385 | 52.519 | 29.556 | 1.00 | 15.47 |
|    | ATOM | 562 | OD1 | ASN | A | 74 | 0 | 12.557 | 53.250 | 29.021 | 1.00 | 13.99 |



|     |      |     |     |     |   |    |   |        |        |        |      |       |
|-----|------|-----|-----|-----|---|----|---|--------|--------|--------|------|-------|
|     | ATOM | 563 | ND2 | ASN | A | 74 | 0 | 13.063 | 51.500 | 30.367 | 1.00 | 13.91 |
|     | ATOM | 564 | N   | TRP | A | 75 | 0 | 14.806 | 53.765 | 26.041 | 1.00 | 16.16 |
|     | ATOM | 565 | CA  | TRP | A | 75 | 0 | 14.036 | 54.262 | 24.917 | 1.00 | 16.49 |
|     | ATOM | 566 | C   | TRP | A | 75 | 0 | 14.050 | 53.345 | 23.701 | 1.00 | 17.29 |
| 5   | ATOM | 567 | O   | TRP | A | 75 | 0 | 13.235 | 53.529 | 22.776 | 1.00 | 16.34 |
|     | ATOM | 568 | CB  | TRP | A | 75 | 0 | 14.516 | 55.657 | 24.509 | 1.00 | 15.90 |
|     | ATOM | 569 | CG  | TRP | A | 75 | 0 | 15.990 | 55.705 | 24.207 | 1.00 | 16.04 |
|     | ATOM | 570 | CD1 | TRP | A | 75 | 0 | 17.011 | 55.972 | 25.072 | 1.00 | 14.90 |
|     | ATOM | 571 | CD2 | TRP | A | 75 | 0 | 16.584 | 55.475 | 22.916 | 1.00 | 15.94 |
| 10  | ATOM | 572 | NE1 | TRP | A | 75 | 0 | 18.210 | 55.917 | 24.384 | 1.00 | 15.89 |
|     | ATOM | 573 | CE2 | TRP | A | 75 | 0 | 17.977 | 55.624 | 23.076 | 1.00 | 15.80 |
|     | ATOM | 574 | CE3 | TRP | A | 75 | 0 | 16.060 | 55.171 | 21.656 | 1.00 | 14.88 |
|     | ATOM | 575 | CZ2 | TRP | A | 75 | 0 | 18.867 | 55.459 | 22.016 | 1.00 | 17.60 |
|     | ATOM | 576 | CZ3 | TRP | A | 75 | 0 | 16.928 | 55.025 | 20.603 | 1.00 | 16.64 |
| 15  | ATOM | 577 | CH2 | TRP | A | 75 | 0 | 18.321 | 55.153 | 20.785 | 1.00 | 18.16 |
| 20  | ATOM | 578 | N   | ALA | A | 76 | 0 | 14.962 | 52.372 | 23.675 | 1.00 | 15.12 |
| 25  | ATOM | 579 | CA  | ALA | A | 76 | 0 | 15.075 | 51.430 | 22.578 | 1.00 | 14.61 |
| 30  | ATOM | 580 | C   | ALA | A | 76 | 0 | 14.569 | 50.047 | 22.971 | 1.00 | 13.98 |
| 35  | ATOM | 581 | O   | ALA | A | 76 | 0 | 14.617 | 49.132 | 22.159 | 1.00 | 14.20 |
| 40  | ATOM | 582 | CB  | ALA | A | 76 | 0 | 16.554 | 51.354 | 22.157 | 1.00 | 13.68 |
| 45  | ATOM | 583 | N   | ASP | A | 77 | 0 | 13.941 | 49.885 | 24.121 | 1.00 | 14.47 |
| 50  | ATOM | 584 | CA  | ASP | A | 77 | 0 | 13.409 | 48.605 | 24.586 | 1.00 | 14.23 |
| 55  | ATOM | 585 | C   | ASP | A | 77 | 0 | 12.198 | 48.167 | 23.762 | 1.00 | 15.04 |
| 60  | ATOM | 586 | O   | ASP | A | 77 | 0 | 11.982 | 46.946 | 23.638 | 1.00 | 13.78 |
| 65  | ATOM | 587 | CB  | ASP | A | 77 | 0 | 13.112 | 48.567 | 26.072 | 1.00 | 13.41 |
| 70  | ATOM | 588 | CG  | ASP | A | 77 | 0 | 12.945 | 47.155 | 26.612 | 1.00 | 14.93 |
| 75  | ATOM | 589 | OD1 | ASP | A | 77 | 0 | 11.943 | 46.986 | 27.345 | 1.00 | 15.07 |
| 80  | ATOM | 590 | OD2 | ASP | A | 77 | 0 | 13.744 | 46.217 | 26.334 | 1.00 | 13.73 |
| 85  | ATOM | 591 | N   | GLY | A | 78 | 0 | 11.458 | 49.095 | 23.160 | 1.00 | 13.63 |
| 90  | ATOM | 592 | CA  | GLY | A | 78 | 0 | 10.442 | 48.686 | 22.210 | 1.00 | 14.96 |
| 95  | ATOM | 593 | C   | GLY | A | 78 | 0 | 9.040  | 48.309 | 22.631 | 1.00 | 16.75 |
| 100 | ATOM | 594 | O   | GLY | A | 78 | 0 | 8.276  | 47.865 | 21.755 | 1.00 | 16.49 |
| 105 | ATOM | 595 | N   | ALA | A | 79 | 0 | 8.631  | 48.436 | 23.886 | 1.00 | 15.34 |
| 110 | ATOM | 596 | CA  | ALA | A | 79 | 0 | 7.252  | 48.176 | 24.270 | 1.00 | 14.70 |
| 115 | ATOM | 597 | C   | ALA | A | 79 | 0 | 6.490  | 49.495 | 24.084 | 1.00 | 17.51 |
| 120 | ATOM | 598 | O   | ALA | A | 79 | 0 | 6.690  | 50.486 | 24.807 | 1.00 | 17.05 |
| 125 | ATOM | 599 | CB  | ALA | A | 79 | 0 | 7.145  | 47.701 | 25.708 | 1.00 | 14.78 |
| 130 | ATOM | 600 | N   | ASP | A | 80 | 0 | 5.641  | 49.536 | 23.053 | 1.00 | 18.56 |

|    |      |     |     |     |   |    |   |        |        |        |      |       |
|----|------|-----|-----|-----|---|----|---|--------|--------|--------|------|-------|
|    | ATOM | 601 | CA  | ASP | A | 80 | 0 | 4.859  | 50.741 | 22.798 | 1.00 | 19.52 |
|    | ATOM | 602 | C   | ASP | A | 80 | 0 | 3.959  | 50.963 | 24.010 | 1.00 | 17.61 |
|    | ATOM | 603 | O   | ASP | A | 80 | 0 | 3.530  | 49.999 | 24.664 | 1.00 | 16.72 |
|    | ATOM | 604 | CB  | ASP | A | 80 | 0 | 4.044  | 50.714 | 21.510 | 1.00 | 24.02 |
| 5  | ATOM | 605 | CG  | ASP | A | 80 | 0 | 3.003  | 49.607 | 21.549 | 1.00 | 28.13 |
|    | ATOM | 606 | OD1 | ASP | A | 80 | 0 | 3.410  | 48.417 | 21.541 | 1.00 | 30.66 |
|    | ATOM | 607 | OD2 | ASP | A | 80 | 0 | 1.803  | 49.959 | 21.603 | 1.00 | 30.61 |
|    | ATOM | 608 | N   | GLY | A | 81 | 0 | 3.776  | 52.242 | 24.337 | 1.00 | 15.85 |
|    | ATOM | 609 | CA  | GLY | A | 81 | 0 | 2.991  | 52.566 | 25.532 | 1.00 | 16.27 |
| 10 | ATOM | 610 | C   | GLY | A | 81 | 0 | 3.846  | 52.615 | 26.784 | 1.00 | 18.72 |
|    | ATOM | 611 | O   | GLY | A | 81 | 0 | 3.405  | 52.983 | 27.890 | 1.00 | 20.61 |
|    | ATOM | 612 | N   | VAL | A | 82 | 0 | 5.108  | 52.173 | 26.725 | 1.00 | 19.11 |
|    | ATOM | 613 | CA  | VAL | A | 82 | 0 | 5.978  | 52.119 | 27.890 | 1.00 | 19.14 |
|    | ATOM | 614 | C   | VAL | A | 82 | 0 | 7.288  | 52.851 | 27.590 | 1.00 | 18.41 |
| 15 | ATOM | 615 | O   | VAL | A | 82 | 0 | 7.594  | 53.839 | 28.242 | 1.00 | 16.79 |
|    | ATOM | 616 | CB  | VAL | A | 82 | 0 | 6.266  | 50.697 | 28.390 | 1.00 | 19.82 |
|    | ATOM | 617 | CG1 | VAL | A | 82 | 0 | 7.059  | 50.741 | 29.710 | 1.00 | 21.37 |
|    | ATOM | 618 | CG2 | VAL | A | 82 | 0 | 4.995  | 49.894 | 28.640 | 1.00 | 19.27 |
|    | ATOM | 619 | N   | ASN | A | 83 | 0 | 7.982  | 52.408 | 26.551 | 1.00 | 17.90 |
| 20 | ATOM | 620 | CA  | ASN | A | 83 | 0 | 9.271  | 52.926 | 26.147 | 1.00 | 16.94 |
|    | ATOM | 621 | C   | ASN | A | 83 | 0 | 9.226  | 53.778 | 24.886 | 1.00 | 18.32 |
|    | ATOM | 622 | O   | ASN | A | 83 | 0 | 10.175 | 54.551 | 24.634 | 1.00 | 20.58 |
|    | ATOM | 623 | CB  | ASN | A | 83 | 0 | 10.249 | 51.747 | 25.937 | 1.00 | 15.23 |
|    | ATOM | 624 | CG  | ASN | A | 83 | 0 | 10.112 | 50.745 | 27.063 | 1.00 | 16.00 |
| 25 | ATOM | 625 | OD1 | ASN | A | 83 | 0 | 9.493  | 49.676 | 26.879 | 1.00 | 14.98 |
|    | ATOM | 626 | ND2 | ASN | A | 83 | 0 | 10.583 | 51.131 | 28.249 | 1.00 | 13.17 |
|    | ATOM | 627 | N   | GLN | A | 84 | 0 | 8.183  | 53.668 | 24.066 | 1.00 | 16.40 |
|    | ATOM | 628 | CA  | GLN | A | 84 | 0 | 8.080  | 54.464 | 22.867 | 1.00 | 16.34 |
|    | ATOM | 629 | C   | GLN | A | 84 | 0 | 6.658  | 54.465 | 22.309 | 1.00 | 17.95 |
| 30 | ATOM | 630 | O   | GLN | A | 84 | 0 | 5.816  | 53.679 | 22.728 | 1.00 | 17.69 |
|    | ATOM | 631 | CB  | GLN | A | 84 | 0 | 8.995  | 53.953 | 21.754 | 1.00 | 17.98 |
|    | ATOM | 632 | CG  | GLN | A | 84 | 0 | 8.456  | 52.654 | 21.127 | 1.00 | 16.63 |
|    | ATOM | 633 | CD  | GLN | A | 84 | 0 | 9.272  | 52.225 | 19.938 | 1.00 | 18.17 |
|    | ATOM | 634 | OE1 | GLN | A | 84 | 0 | 8.994  | 52.601 | 18.792 | 1.00 | 20.91 |
| 35 | ATOM | 635 | NE2 | GLN | A | 84 | 0 | 10.279 | 51.385 | 20.096 | 1.00 | 18.70 |
|    | ATOM | 636 | N   | CYS | A | 85 | 0 | 6.419  | 55.350 | 21.365 | 1.00 | 18.60 |
|    | ATOM | 637 | CA  | CYS | A | 85 | 0 | 5.140  | 55.344 | 20.622 | 1.00 | 20.25 |
|    | ATOM | 638 | C   | CYS | A | 85 | 0 | 5.512  | 54.555 | 19.375 | 1.00 | 19.55 |

|    |      |     |     |     |   |    |   |        |        |        |      |       |
|----|------|-----|-----|-----|---|----|---|--------|--------|--------|------|-------|
|    | ATOM | 639 | O   | CYS | A | 85 | 0 | 6.690  | 54.546 | 18.995 | 1.00 | 18.92 |
|    | ATOM | 640 | CB  | CYS | A | 85 | 0 | 4.772  | 56.786 | 20.228 | 1.00 | 22.20 |
|    | ATOM | 641 | SG  | CYS | A | 85 | 0 | 3.899  | 57.783 | 21.481 | 1.00 | 24.65 |
|    | ATOM | 642 | N   | PRO | A | 86 | 0 | 4.589  | 53.951 | 18.674 | 1.00 | 21.19 |
| 5  | ATOM | 643 | CA  | PRO | A | 86 | 0 | 4.869  | 53.152 | 17.498 | 1.00 | 20.78 |
|    | ATOM | 644 | C   | PRO | A | 86 | 0 | 5.560  | 53.930 | 16.394 | 1.00 | 21.46 |
|    | ATOM | 645 | O   | PRO | A | 86 | 0 | 5.453  | 55.137 | 16.298 | 1.00 | 23.08 |
|    | ATOM | 646 | CB  | PRO | A | 86 | 0 | 3.530  | 52.555 | 17.028 | 1.00 | 19.94 |
|    | ATOM | 647 | CG  | PRO | A | 86 | 0 | 2.667  | 52.720 | 18.252 | 1.00 | 19.59 |
| 10 | ATOM | 648 | CD  | PRO | A | 86 | 0 | 3.174  | 53.872 | 19.062 | 1.00 | 20.46 |
|    | ATOM | 649 | N   | ILE | A | 87 | 0 | 6.318  | 53.259 | 15.550 | 1.00 | 20.95 |
|    | ATOM | 650 | CA  | ILE | A | 87 | 0 | 6.907  | 53.773 | 14.337 | 1.00 | 22.43 |
|    | ATOM | 651 | C   | ILE | A | 87 | 0 | 5.768  | 53.641 | 13.292 | 1.00 | 22.80 |
|    | ATOM | 652 | O   | ILE | A | 87 | 0 | 5.148  | 52.562 | 13.228 | 1.00 | 21.61 |
| 15 | ATOM | 653 | CB  | ILE | A | 87 | 0 | 8.105  | 52.954 | 13.844 | 1.00 | 21.99 |
| 16 | ATOM | 654 | CG1 | ILE | A | 87 | 0 | 9.130  | 52.696 | 14.944 | 1.00 | 24.18 |
| 17 | ATOM | 655 | CG2 | ILE | A | 87 | 0 | 8.773  | 53.656 | 12.674 | 1.00 | 22.91 |
| 18 | ATOM | 656 | CD1 | ILE | A | 87 | 0 | 10.256 | 51.776 | 14.514 | 1.00 | 23.87 |
| 19 | ATOM | 657 | N   | SER | A | 88 | 0 | 5.464  | 54.702 | 12.570 | 1.00 | 22.64 |
| 20 | ATOM | 658 | CA  | SER | A | 88 | 0 | 4.338  | 54.709 | 11.647 | 1.00 | 22.85 |
| 21 | ATOM | 659 | C   | SER | A | 88 | 0 | 4.751  | 54.268 | 10.249 | 1.00 | 23.35 |
| 22 | ATOM | 660 | O   | SER | A | 88 | 0 | 5.870  | 54.489 | 9.764  | 1.00 | 23.30 |
| 23 | ATOM | 661 | CB  | SER | A | 88 | 0 | 3.767  | 56.137 | 11.518 | 1.00 | 24.00 |
| 24 | ATOM | 662 | OG  | SER | A | 88 | 0 | 3.379  | 56.770 | 12.720 | 1.00 | 23.93 |
| 25 | ATOM | 663 | N   | PRO | A | 89 | 0 | 3.778  | 53.752 | 9.514  | 1.00 | 23.60 |
| 26 | ATOM | 664 | CA  | PRO | A | 89 | 0 | 3.955  | 53.382 | 8.116  | 1.00 | 25.19 |
| 27 | ATOM | 665 | C   | PRO | A | 89 | 0 | 4.579  | 54.556 | 7.361  | 1.00 | 26.58 |
| 28 | ATOM | 666 | O   | PRO | A | 89 | 0 | 4.177  | 55.699 | 7.585  | 1.00 | 26.66 |
| 29 | ATOM | 667 | CB  | PRO | A | 89 | 0 | 2.566  | 53.065 | 7.555  | 1.00 | 23.59 |
| 30 | ATOM | 668 | CG  | PRO | A | 89 | 0 | 1.740  | 52.856 | 8.798  | 1.00 | 22.37 |
| 31 | ATOM | 669 | CD  | PRO | A | 89 | 0 | 2.415  | 53.513 | 9.970  | 1.00 | 23.25 |
| 32 | ATOM | 670 | N   | GLY | A | 90 | 0 | 5.588  | 54.311 | 6.550  | 1.00 | 27.73 |
| 33 | ATOM | 671 | CA  | GLY | A | 90 | 0 | 6.223  | 55.338 | 5.748  | 1.00 | 30.55 |
| 34 | ATOM | 672 | C   | GLY | A | 90 | 0 | 7.384  | 56.032 | 6.438  | 1.00 | 32.38 |
| 35 | ATOM | 673 | O   | GLY | A | 90 | 0 | 8.050  | 56.894 | 5.879  | 1.00 | 32.53 |
| 36 | ATOM | 674 | N   | HIS | A | 91 | 0 | 7.639  | 55.693 | 7.702  | 1.00 | 32.77 |
| 37 | ATOM | 675 | CA  | HIS | A | 91 | 0 | 8.691  | 56.283 | 8.494  | 1.00 | 32.55 |
| 38 | ATOM | 676 | C   | HIS | A | 91 | 0 | 9.649  | 55.179 | 8.982  | 1.00 | 32.36 |

|    |      |     |     |     |   |    |   |        |        |        |      |       |
|----|------|-----|-----|-----|---|----|---|--------|--------|--------|------|-------|
|    | ATOM | 677 | O   | HIS | A | 91 | 0 | 9.381  | 53.972 | 8.961  | 1.00 | 31.30 |
|    | ATOM | 678 | CB  | HIS | A | 91 | 0 | 8.118  | 57.016 | 9.722  | 1.00 | 33.75 |
|    | ATOM | 679 | CG  | HIS | A | 91 | 0 | 7.147  | 58.073 | 9.295  | 1.00 | 34.64 |
|    | ATOM | 680 | ND1 | HIS | A | 91 | 0 | 7.519  | 59.381 | 9.072  | 1.00 | 34.41 |
| 5  | ATOM | 681 | CD2 | HIS | A | 91 | 0 | 5.822  | 57.977 | 9.002  | 1.00 | 34.89 |
|    | ATOM | 682 | CE1 | HIS | A | 91 | 0 | 6.450  | 60.050 | 8.679  | 1.00 | 34.87 |
|    | ATOM | 683 | NE2 | HIS | A | 91 | 0 | 5.410  | 59.233 | 8.628  | 1.00 | 35.14 |
|    | ATOM | 684 | N   | ALA | A | 92 | 0 | 10.786 | 55.668 | 9.437  | 1.00 | 29.57 |
|    | ATOM | 685 | CA  | ALA | A | 92 | 0 | 11.895 | 54.898 | 9.937  | 1.00 | 27.71 |
| 10 | ATOM | 686 | C   | ALA | A | 92 | 0 | 12.316 | 55.347 | 11.337 | 1.00 | 27.41 |
|    | ATOM | 687 | O   | ALA | A | 92 | 0 | 12.076 | 56.484 | 11.741 | 1.00 | 26.12 |
|    | ATOM | 688 | CB  | ALA | A | 92 | 0 | 13.051 | 55.057 | 8.967  | 1.00 | 25.23 |
|    | ATOM | 689 | N   | PHE | A | 93 | 0 | 12.931 | 54.418 | 12.081 | 1.00 | 26.87 |
|    | ATOM | 690 | CA  | PHE | A | 93 | 0 | 13.441 | 54.760 | 13.405 | 1.00 | 25.87 |
| 15 | ATOM | 691 | C   | PHE | A | 93 | 0 | 14.746 | 54.008 | 13.632 | 1.00 | 25.21 |
|    | ATOM | 692 | O   | PHE | A | 93 | 0 | 14.797 | 52.810 | 13.347 | 1.00 | 25.80 |
|    | ATOM | 693 | CB  | PHE | A | 93 | 0 | 12.457 | 54.456 | 14.526 | 1.00 | 25.30 |
|    | ATOM | 694 | CG  | PHE | A | 93 | 0 | 12.964 | 54.955 | 15.847 | 1.00 | 25.41 |
|    | ATOM | 695 | CD1 | PHE | A | 93 | 0 | 13.154 | 56.309 | 16.061 | 1.00 | 25.36 |
| 20 | ATOM | 696 | CD2 | PHE | A | 93 | 0 | 13.276 | 54.057 | 16.853 | 1.00 | 25.31 |
|    | ATOM | 697 | CE1 | PHE | A | 93 | 0 | 13.637 | 56.753 | 17.285 | 1.00 | 26.54 |
|    | ATOM | 698 | CE2 | PHE | A | 93 | 0 | 13.754 | 54.503 | 18.078 | 1.00 | 25.39 |
|    | ATOM | 699 | CZ  | PHE | A | 93 | 0 | 13.935 | 55.857 | 18.302 | 1.00 | 25.01 |
|    | ATOM | 700 | N   | LEU | A | 94 | 0 | 15.756 | 54.699 | 14.136 | 1.00 | 23.39 |
|    | ATOM | 701 | CA  | LEU | A | 94 | 0 | 17.046 | 54.058 | 14.361 | 1.00 | 23.35 |
|    | ATOM | 702 | C   | LEU | A | 94 | 0 | 17.191 | 53.611 | 15.804 | 1.00 | 23.22 |
|    | ATOM | 703 | O   | LEU | A | 94 | 0 | 17.261 | 54.431 | 16.714 | 1.00 | 23.47 |
|    | ATOM | 704 | CB  | LEU | A | 94 | 0 | 18.186 | 54.994 | 13.943 | 1.00 | 24.96 |
|    | ATOM | 705 | CG  | LEU | A | 94 | 0 | 19.630 | 54.555 | 14.170 | 1.00 | 26.28 |
| 30 | ATOM | 706 | CD1 | LEU | A | 94 | 0 | 19.979 | 53.313 | 13.352 | 1.00 | 25.99 |
|    | ATOM | 707 | CD2 | LEU | A | 94 | 0 | 20.627 | 55.678 | 13.887 | 1.00 | 26.06 |
|    | ATOM | 708 | N   | TYR | A | 95 | 0 | 17.261 | 52.293 | 16.023 | 1.00 | 21.81 |
|    | ATOM | 709 | CA  | TYR | A | 95 | 0 | 17.481 | 51.780 | 17.379 | 1.00 | 19.72 |
|    | ATOM | 710 | C   | TYR | A | 95 | 0 | 18.991 | 51.663 | 17.585 | 1.00 | 20.90 |
| 35 | ATOM | 711 | O   | TYR | A | 95 | 0 | 19.690 | 51.248 | 16.656 | 1.00 | 20.74 |
|    | ATOM | 712 | CB  | TYR | A | 95 | 0 | 16.831 | 50.448 | 17.609 | 1.00 | 17.86 |
|    | ATOM | 713 | CG  | TYR | A | 95 | 0 | 15.329 | 50.411 | 17.691 | 1.00 | 16.35 |
|    | ATOM | 714 | CD1 | TYR | A | 95 | 0 | 14.541 | 50.288 | 16.535 | 1.00 | 16.89 |

|    |      |     |     |     |   |    |   |        |        |        |      |       |
|----|------|-----|-----|-----|---|----|---|--------|--------|--------|------|-------|
|    | ATOM | 715 | CD2 | TYR | A | 95 | 0 | 14.701 | 50.442 | 18.911 | 1.00 | 15.71 |
|    | ATOM | 716 | CE1 | TYR | A | 95 | 0 | 13.157 | 50.205 | 16.621 | 1.00 | 17.21 |
|    | ATOM | 717 | CE2 | TYR | A | 95 | 0 | 13.325 | 50.362 | 19.033 | 1.00 | 16.25 |
|    | ATOM | 718 | CZ  | TYR | A | 95 | 0 | 12.568 | 50.266 | 17.874 | 1.00 | 17.97 |
| 5  | ATOM | 719 | OH  | TYR | A | 95 | 0 | 11.205 | 50.189 | 18.001 | 1.00 | 18.61 |
|    | ATOM | 720 | N   | LYS | A | 96 | 0 | 19.475 | 52.105 | 18.752 | 1.00 | 20.56 |
|    | ATOM | 721 | CA  | LYS | A | 96 | 0 | 20.917 | 52.058 | 18.975 | 1.00 | 21.77 |
|    | ATOM | 722 | C   | LYS | A | 96 | 0 | 21.139 | 51.519 | 20.386 | 1.00 | 20.91 |
|    | ATOM | 723 | O   | LYS | A | 96 | 0 | 20.558 | 52.122 | 21.286 | 1.00 | 21.98 |
| 10 | ATOM | 724 | CB  | LYS | A | 96 | 0 | 21.565 | 53.427 | 18.960 | 1.00 | 22.89 |
|    | ATOM | 725 | CG  | LYS | A | 96 | 0 | 21.857 | 54.046 | 17.609 | 1.00 | 26.39 |
|    | ATOM | 726 | CD  | LYS | A | 96 | 0 | 22.749 | 55.251 | 17.923 | 1.00 | 30.80 |
|    | ATOM | 727 | CE  | LYS | A | 96 | 0 | 22.732 | 56.348 | 16.884 | 1.00 | 32.90 |
|    | ATOM | 728 | NZ  | LYS | A | 96 | 0 | 23.767 | 57.378 | 17.277 | 1.00 | 36.06 |
|    | ATOM | 729 | N   | PHE | A | 97 | 0 | 21.871 | 50.437 | 20.520 | 1.00 | 18.14 |
|    | ATOM | 730 | CA  | PHE | A | 97 | 0 | 22.062 | 49.863 | 21.854 | 1.00 | 18.19 |
|    | ATOM | 731 | C   | PHE | A | 97 | 0 | 23.276 | 48.928 | 21.805 | 1.00 | 16.76 |
|    | ATOM | 732 | O   | PHE | A | 97 | 0 | 23.870 | 48.700 | 20.747 | 1.00 | 14.19 |
|    | ATOM | 733 | CB  | PHE | A | 97 | 0 | 20.816 | 49.067 | 22.307 | 1.00 | 17.34 |
|    | ATOM | 734 | CG  | PHE | A | 97 | 0 | 20.379 | 48.026 | 21.304 | 1.00 | 17.56 |
|    | ATOM | 735 | CD1 | PHE | A | 97 | 0 | 20.873 | 46.732 | 21.348 | 1.00 | 16.27 |
|    | ATOM | 736 | CD2 | PHE | A | 97 | 0 | 19.451 | 48.343 | 20.326 | 1.00 | 18.65 |
|    | ATOM | 737 | CE1 | PHE | A | 97 | 0 | 20.476 | 45.801 | 20.398 | 1.00 | 17.76 |
|    | ATOM | 738 | CE2 | PHE | A | 97 | 0 | 19.026 | 47.408 | 19.386 | 1.00 | 18.64 |
|    | ATOM | 739 | CZ  | PHE | A | 97 | 0 | 19.546 | 46.120 | 19.416 | 1.00 | 17.55 |
|    | ATOM | 740 | N   | THR | A | 98 | 0 | 23.552 | 48.348 | 22.971 | 1.00 | 17.45 |
|    | ATOM | 741 | CA  | THR | A | 98 | 0 | 24.644 | 47.359 | 22.992 | 1.00 | 17.00 |
|    | ATOM | 742 | C   | THR | A | 98 | 0 | 24.304 | 46.333 | 24.042 | 1.00 | 16.63 |
|    | ATOM | 743 | O   | THR | A | 98 | 0 | 23.725 | 46.631 | 25.090 | 1.00 | 15.86 |
| 30 | ATOM | 744 | CB  | THR | A | 98 | 0 | 26.028 | 47.990 | 23.256 | 1.00 | 17.53 |
|    | ATOM | 745 | OG1 | THR | A | 98 | 0 | 27.017 | 46.924 | 23.372 | 1.00 | 19.01 |
|    | ATOM | 746 | CG2 | THR | A | 98 | 0 | 26.088 | 48.807 | 24.525 | 1.00 | 14.85 |
|    | ATOM | 747 | N   | PRO | A | 99 | 0 | 24.740 | 45.097 | 23.831 | 1.00 | 15.98 |
|    | ATOM | 748 | CA  | PRO | A | 99 | 0 | 24.601 | 44.019 | 24.787 | 1.00 | 15.11 |
| 35 | ATOM | 749 | C   | PRO | A | 99 | 0 | 25.445 | 44.270 | 26.020 | 1.00 | 15.99 |
|    | ATOM | 750 | O   | PRO | A | 99 | 0 | 25.260 | 43.633 | 27.064 | 1.00 | 15.94 |
|    | ATOM | 751 | CB  | PRO | A | 99 | 0 | 25.025 | 42.717 | 24.098 | 1.00 | 15.83 |
|    | ATOM | 752 | CG  | PRO | A | 99 | 0 | 25.042 | 43.140 | 22.644 | 1.00 | 17.12 |

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|    |      |     |     |     |   |     |   |        |        |        |      |       |
|----|------|-----|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 753 | CD  | PRO | A | 99  | 0 | 25.362 | 44.627 | 22.601 | 1.00 | 15.68 |
|    | ATOM | 754 | N   | ALA | A | 100 | 0 | 26.452 | 45.149 | 25.932 | 1.00 | 17.29 |
|    | ATOM | 755 | CA  | ALA | A | 100 | 0 | 27.316 | 45.501 | 27.050 | 1.00 | 16.88 |
|    | ATOM | 756 | C   | ALA | A | 100 | 0 | 27.919 | 44.293 | 27.754 | 1.00 | 16.16 |
| 5  | ATOM | 757 | O   | ALA | A | 100 | 0 | 27.779 | 44.187 | 28.977 | 1.00 | 18.13 |
|    | ATOM | 758 | CB  | ALA | A | 100 | 0 | 26.498 | 46.292 | 28.084 | 1.00 | 14.96 |
|    | ATOM | 759 | N   | GLY | A | 101 | 0 | 28.474 | 43.360 | 27.033 | 1.00 | 16.41 |
|    | ATOM | 760 | CA  | GLY | A | 101 | 0 | 29.063 | 42.172 | 27.599 | 1.00 | 17.49 |
|    | ATOM | 761 | C   | GLY | A | 101 | 0 | 28.130 | 40.994 | 27.769 | 1.00 | 16.15 |
| 10 | ATOM | 762 | O   | GLY | A | 101 | 0 | 28.593 | 39.930 | 28.137 | 1.00 | 16.57 |
|    | ATOM | 763 | N   | HIS | A | 102 | 0 | 26.838 | 41.120 | 27.521 | 1.00 | 17.58 |
|    | ATOM | 764 | CA  | HIS | A | 102 | 0 | 25.858 | 40.058 | 27.804 | 1.00 | 15.77 |
|    | ATOM | 765 | C   | HIS | A | 102 | 0 | 25.707 | 39.165 | 26.600 | 1.00 | 15.28 |
|    | ATOM | 766 | O   | HIS | A | 102 | 0 | 25.087 | 39.641 | 25.662 | 1.00 | 17.64 |
| 15 | ATOM | 767 | CB  | HIS | A | 102 | 0 | 24.498 | 40.666 | 28.186 | 1.00 | 17.95 |
|    | ATOM | 768 | CG  | HIS | A | 102 | 0 | 23.432 | 39.661 | 28.493 | 1.00 | 20.00 |
|    | ATOM | 769 | ND1 | HIS | A | 102 | 0 | 22.099 | 40.005 | 28.547 | 1.00 | 20.59 |
|    | ATOM | 770 | CD2 | HIS | A | 102 | 0 | 23.475 | 38.323 | 28.772 | 1.00 | 20.09 |
|    | ATOM | 771 | CE1 | HIS | A | 102 | 0 | 21.398 | 38.937 | 28.866 | 1.00 | 20.77 |
| 20 | ATOM | 772 | NE2 | HIS | A | 102 | 0 | 22.201 | 37.896 | 29.016 | 1.00 | 20.56 |
|    | ATOM | 773 | N   | ALA | A | 103 | 0 | 26.277 | 37.958 | 26.584 | 1.00 | 13.32 |
|    | ATOM | 774 | CA  | ALA | A | 103 | 0 | 26.141 | 37.127 | 25.415 | 1.00 | 13.99 |
|    | ATOM | 775 | C   | ALA | A | 103 | 0 | 24.974 | 36.156 | 25.649 | 1.00 | 13.43 |
|    | ATOM | 776 | O   | ALA | A | 103 | 0 | 24.571 | 35.905 | 26.784 | 1.00 | 11.81 |
| 25 | ATOM | 777 | CB  | ALA | A | 103 | 0 | 27.418 | 36.329 | 25.151 | 1.00 | 16.36 |
|    | ATOM | 778 | N   | GLY | A | 104 | 0 | 24.459 | 35.610 | 24.554 | 1.00 | 12.38 |
|    | ATOM | 779 | CA  | GLY | A | 104 | 0 | 23.381 | 34.632 | 24.778 | 1.00 | 12.85 |
|    | ATOM | 780 | C   | GLY | A | 104 | 0 | 22.480 | 34.451 | 23.581 | 1.00 | 11.06 |
|    | ATOM | 781 | O   | GLY | A | 104 | 0 | 22.674 | 35.057 | 22.515 | 1.00 | 10.91 |
| 30 | ATOM | 782 | N   | THR | A | 105 | 0 | 21.442 | 33.650 | 23.794 | 1.00 | 10.14 |
|    | ATOM | 783 | CA  | THR | A | 105 | 0 | 20.490 | 33.394 | 22.704 | 1.00 | 10.04 |
|    | ATOM | 784 | C   | THR | A | 105 | 0 | 19.238 | 34.236 | 22.989 | 1.00 | 9.52  |
|    | ATOM | 785 | O   | THR | A | 105 | 0 | 18.738 | 34.194 | 24.125 | 1.00 | 7.52  |
|    | ATOM | 786 | CB  | THR | A | 105 | 0 | 20.114 | 31.913 | 22.665 | 1.00 | 12.67 |
| 35 | ATOM | 787 | OG1 | THR | A | 105 | 0 | 21.273 | 31.075 | 22.593 | 1.00 | 13.47 |
|    | ATOM | 788 | CG2 | THR | A | 105 | 0 | 19.187 | 31.684 | 21.468 | 1.00 | 12.75 |
|    | ATOM | 789 | N   | PHE | A | 106 | 0 | 18.842 | 35.065 | 22.044 | 1.00 | 7.76  |
|    | ATOM | 790 | CA  | PHE | A | 106 | 0 | 17.731 | 35.992 | 22.243 | 1.00 | 10.15 |

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|    |      |     |     |           |   |        |        |        |      |       |
|----|------|-----|-----|-----------|---|--------|--------|--------|------|-------|
|    | ATOM | 791 | C   | PHE A 106 | 0 | 16.756 | 35.910 | 21.068 | 1.00 | 8.42  |
|    | ATOM | 792 | O   | PHE A 106 | 0 | 16.941 | 35.083 | 20.166 | 1.00 | 8.33  |
|    | ATOM | 793 | CB  | PHE A 106 | 0 | 18.283 | 37.460 | 22.369 | 1.00 | 10.19 |
|    | ATOM | 794 | CG  | PHE A 106 | 0 | 19.291 | 37.577 | 23.506 | 1.00 | 12.95 |
| 5  | ATOM | 795 | CD1 | PHE A 106 | 0 | 18.905 | 37.443 | 24.815 | 1.00 | 11.44 |
|    | ATOM | 796 | CD2 | PHE A 106 | 0 | 20.654 | 37.775 | 23.230 | 1.00 | 12.37 |
|    | ATOM | 797 | CE1 | PHE A 106 | 0 | 19.855 | 37.531 | 25.822 | 1.00 | 14.20 |
|    | ATOM | 798 | CE2 | PHE A 106 | 0 | 21.574 | 37.857 | 24.273 | 1.00 | 11.56 |
|    | ATOM | 799 | CZ  | PHE A 106 | 0 | 21.202 | 37.733 | 25.599 | 1.00 | 9.45  |
| 10 | ATOM | 800 | N   | TRP A 107 | 0 | 15.869 | 36.887 | 20.917 | 1.00 | 6.61  |
|    | ATOM | 801 | CA  | TRP A 107 | 0 | 15.062 | 36.977 | 19.713 | 1.00 | 10.20 |
|    | ATOM | 802 | C   | TRP A 107 | 0 | 14.511 | 38.398 | 19.625 | 1.00 | 10.63 |
|    | ATOM | 803 | O   | TRP A 107 | 0 | 14.463 | 39.036 | 20.657 | 1.00 | 13.71 |
|    | ATOM | 804 | CB  | TRP A 107 | 0 | 13.928 | 35.966 | 19.636 | 1.00 | 7.49  |
|    | ATOM | 805 | CG  | TRP A 107 | 0 | 12.945 | 35.916 | 20.755 | 1.00 | 9.41  |
|    | ATOM | 806 | CD1 | TRP A 107 | 0 | 13.136 | 35.804 | 22.106 | 1.00 | 10.53 |
|    | ATOM | 807 | CD2 | TRP A 107 | 0 | 11.509 | 36.004 | 20.581 | 1.00 | 9.17  |
|    | ATOM | 808 | NE1 | TRP A 107 | 0 | 11.929 | 35.784 | 22.768 | 1.00 | 10.63 |
|    | ATOM | 809 | CE2 | TRP A 107 | 0 | 10.924 | 35.926 | 21.842 | 1.00 | 9.90  |
| 20 | ATOM | 810 | CE3 | TRP A 107 | 0 | 10.698 | 36.144 | 19.444 | 1.00 | 8.77  |
|    | ATOM | 811 | CZ2 | TRP A 107 | 0 | 9.538  | 35.947 | 22.025 | 1.00 | 10.01 |
|    | ATOM | 812 | CZ3 | TRP A 107 | 0 | 9.336  | 36.167 | 19.613 | 1.00 | 8.60  |
|    | ATOM | 813 | CH2 | TRP A 107 | 0 | 8.774  | 36.061 | 20.890 | 1.00 | 10.09 |
|    | ATOM | 814 | N   | TYR A 108 | 0 | 14.117 | 38.847 | 18.464 | 1.00 | 10.72 |
| 25 | ATOM | 815 | CA  | TYR A 108 | 0 | 13.498 | 40.148 | 18.302 | 1.00 | 12.19 |
|    | ATOM | 816 | C   | TYR A 108 | 0 | 12.030 | 39.869 | 17.875 | 1.00 | 13.62 |
|    | ATOM | 817 | O   | TYR A 108 | 0 | 11.752 | 38.837 | 17.245 | 1.00 | 13.85 |
|    | ATOM | 818 | CB  | TYR A 108 | 0 | 14.182 | 40.994 | 17.259 | 1.00 | 11.05 |
|    | ATOM | 819 | CG  | TYR A 108 | 0 | 14.176 | 40.413 | 15.857 | 1.00 | 13.89 |
| 30 | ATOM | 820 | CD1 | TYR A 108 | 0 | 15.087 | 39.464 | 15.423 | 1.00 | 12.99 |
|    | ATOM | 821 | CD2 | TYR A 108 | 0 | 13.257 | 40.897 | 14.920 | 1.00 | 14.94 |
|    | ATOM | 822 | CE1 | TYR A 108 | 0 | 15.064 | 38.979 | 14.130 | 1.00 | 13.64 |
|    | ATOM | 823 | CE2 | TYR A 108 | 0 | 13.216 | 40.409 | 13.624 | 1.00 | 15.34 |
|    | ATOM | 824 | CZ  | TYR A 108 | 0 | 14.123 | 39.443 | 13.236 | 1.00 | 14.99 |
| 35 | ATOM | 825 | OH  | TYR A 108 | 0 | 14.063 | 38.960 | 11.946 | 1.00 | 16.68 |
|    | ATOM | 826 | N   | HIS A 109 | 0 | 11.123 | 40.752 | 18.254 | 1.00 | 12.81 |
|    | ATOM | 827 | CA  | HIS A 109 | 0 | 9.735  | 40.630 | 17.826 | 1.00 | 14.92 |
|    | ATOM | 828 | C   | HIS A 109 | 0 | 9.057  | 41.988 | 17.991 | 1.00 | 15.96 |

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ATOM      829  O   HIS A 109  0    9.392  42.800  18.875   1.00  15.67
ATOM      830  CB  HIS A 109  0    8.903  39.566  18.550   1.00  12.30
ATOM      831  CG  HIS A 109  0    8.804  39.727  20.036   1.00  12.30
ATOM      832  ND1 HIS A 109  0    7.788  40.429  20.666   1.00   9.89
5 ATOM      833  CD2 HIS A 109  0    9.614  39.264  21.034   1.00  10.76
ATOM      834  CE1 HIS A 109  0    7.982  40.379  21.971   1.00   8.49
ATOM      835  NE2 HIS A 109  0    9.086  39.679  22.224   1.00   7.92
ATOM      836  N   SER A 110  0    8.070  42.203  17.122   1.00  16.26
ATOM      837  CA  SER A 110  0    7.244  43.404  17.300   1.00  14.55
10 ATOM      838  C   SER A 110  0    6.548  43.283  18.646   1.00  13.56
ATOM      839  O   SER A 110  0    6.219  42.191  19.140   1.00  13.54
ATOM      840  CB  SER A 110  0    6.219  43.543  16.159   1.00  16.69
ATOM      841  OG  SER A 110  0    5.212  44.481  16.508   1.00  15.32
ATOM      842  N   HIS A 111  0    6.396  44.395  19.359   1.00  14.60
15 ATOM      843  CA  HIS A 111  0    5.724  44.397  20.645   1.00  16.23
ATOM      844  C   HIS A 111  0    4.349  45.070  20.478   1.00  18.61
ATOM      845  O   HIS A 111  0    3.713  45.391  21.473   1.00  21.72
ATOM      846  CB  HIS A 111  0    6.478  45.166  21.721   1.00  14.37
ATOM      847  CG  HIS A 111  0    6.392  44.519  23.077   1.00  15.33
20 ATOM      848  ND1 HIS A 111  0    5.341  44.660  23.947   1.00  14.55
ATOM      849  CD2 HIS A 111  0    7.265  43.676  23.680   1.00  14.72
ATOM      850  CE1 HIS A 111  0    5.589  43.936  25.040   1.00  16.29
ATOM      851  NE2 HIS A 111  0    6.773  43.326  24.920   1.00  15.35
ATOM      852  N   PHE A 112  0    3.950  45.382  19.258   1.00  18.67
25 ATOM      853  CA  PHE A 112  0    2.725  46.139  19.037   1.00  19.61
ATOM      854  C   PHE A 112  0    1.540  45.219  18.777   1.00  19.06
ATOM      855  O   PHE A 112  0    1.521  44.630  17.707   1.00  17.50
ATOM      856  CB  PHE A 112  0    2.971  47.113  17.875   1.00  21.16
ATOM      857  CG  PHE A 112  0    1.798  48.019  17.611   1.00  23.12
30 ATOM      858  CD1 PHE A 112  0    1.456  49.007  18.509   1.00  24.59
ATOM      859  CD2 PHE A 112  0    1.034  47.886  16.466   1.00  24.82
ATOM      860  CE1 PHE A 112  0    0.387  49.852  18.312   1.00  24.29
ATOM      861  CE2 PHE A 112  0   -0.063  48.714  16.243   1.00  25.87
ATOM      862  CZ  PHE A 112  0   -0.378  49.698  17.161   1.00  25.17
35 ATOM      863  N   GLY A 113  0    0.599  45.092  19.707   1.00  18.05
ATOM      864  CA  GLY A 113  0   -0.554  44.236  19.433   1.00  19.69
ATOM      865  C   GLY A 113  0   -0.085  42.819  19.096   1.00  22.25
ATOM      866  O   GLY A 113  0    0.937  42.333  19.593   1.00  20.55

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|    |      |     |     |     |   |     |   |        |        |        |      |       |
|----|------|-----|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 905 | CB  | ASP | A | 118 | 0 | 1.142  | 38.696 | 11.131 | 1.00 | 18.61 |
|    | ATOM | 906 | CG  | ASP | A | 118 | 0 | -0.356 | 38.448 | 11.378 | 1.00 | 21.44 |
|    | ATOM | 907 | OD1 | ASP | A | 118 | 0 | -0.826 | 37.331 | 11.082 | 1.00 | 21.55 |
|    | ATOM | 908 | OD2 | ASP | A | 118 | 0 | -1.064 | 39.333 | 11.885 | 1.00 | 21.54 |
| 5  | ATOM | 909 | N   | GLY | A | 119 | 0 | 4.355  | 37.095 | 11.882 | 1.00 | 18.19 |
|    | ATOM | 910 | CA  | GLY | A | 119 | 0 | 5.671  | 36.889 | 11.313 | 1.00 | 19.00 |
|    | ATOM | 911 | C   | GLY | A | 119 | 0 | 6.751  | 37.898 | 11.590 | 1.00 | 19.79 |
|    | ATOM | 912 | O   | GLY | A | 119 | 0 | 7.909  | 37.640 | 11.213 | 1.00 | 19.97 |
|    | ATOM | 913 | N   | LEU | A | 120 | 0 | 6.445  | 39.011 | 12.280 | 1.00 | 18.24 |
| 10 | ATOM | 914 | CA  | LEU | A | 120 | 0 | 7.484  | 39.991 | 12.569 | 1.00 | 16.08 |
|    | ATOM | 915 | C   | LEU | A | 120 | 0 | 8.210  | 39.565 | 13.848 | 1.00 | 16.53 |
|    | ATOM | 916 | O   | LEU | A | 120 | 0 | 7.933  | 40.051 | 14.939 | 1.00 | 15.31 |
|    | ATOM | 917 | CB  | LEU | A | 120 | 0 | 6.918  | 41.389 | 12.654 | 1.00 | 16.22 |
|    | ATOM | 918 | CG  | LEU | A | 120 | 0 | 7.916  | 42.540 | 12.830 | 1.00 | 17.73 |
| 15 | ATOM | 919 | CD1 | LEU | A | 120 | 0 | 9.188  | 42.293 | 12.043 | 1.00 | 17.73 |
| 16 | ATOM | 920 | CD2 | LEU | A | 120 | 0 | 7.302  | 43.880 | 12.448 | 1.00 | 16.66 |
| 17 | ATOM | 921 | N   | ARG | A | 121 | 0 | 9.144  | 38.622 | 13.682 | 1.00 | 14.23 |
| 18 | ATOM | 922 | CA  | ARG | A | 121 | 0 | 9.859  | 37.985 | 14.773 | 1.00 | 14.19 |
| 19 | ATOM | 923 | C   | ARG | A | 121 | 0 | 11.007 | 37.152 | 14.159 | 1.00 | 14.09 |
| 20 | ATOM | 924 | O   | ARG | A | 121 | 0 | 10.936 | 36.787 | 12.978 | 1.00 | 13.72 |
| 21 | ATOM | 925 | CB  | ARG | A | 121 | 0 | 8.934  | 37.061 | 15.581 | 1.00 | 12.30 |
| 22 | ATOM | 926 | CG  | ARG | A | 121 | 0 | 8.253  | 35.999 | 14.728 | 1.00 | 12.44 |
| 23 | ATOM | 927 | CD  | ARG | A | 121 | 0 | 7.303  | 35.098 | 15.518 | 1.00 | 11.94 |
| 24 | ATOM | 928 | NE  | ARG | A | 121 | 0 | 6.507  | 34.269 | 14.604 | 1.00 | 12.92 |
| 25 | ATOM | 929 | CZ  | ARG | A | 121 | 0 | 5.413  | 33.570 | 14.933 | 1.00 | 10.55 |
| 26 | ATOM | 930 | NH1 | ARG | A | 121 | 0 | 4.897  | 33.483 | 16.137 | 1.00 | 8.12  |
| 27 | ATOM | 931 | NH2 | ARG | A | 121 | 0 | 4.803  | 32.946 | 13.930 | 1.00 | 10.40 |
| 28 | ATOM | 932 | N   | GLY | A | 122 | 0 | 12.045 | 36.848 | 14.937 | 1.00 | 12.29 |
| 29 | ATOM | 933 | CA  | GLY | A | 122 | 0 | 13.162 | 36.078 | 14.364 | 1.00 | 11.42 |
| 30 | ATOM | 934 | C   | GLY | A | 122 | 0 | 14.185 | 35.918 | 15.486 | 1.00 | 12.42 |
|    | ATOM | 935 | O   | GLY | A | 122 | 0 | 14.095 | 36.604 | 16.509 | 1.00 | 11.47 |
|    | ATOM | 936 | N   | PRO | A | 123 | 0 | 15.164 | 35.075 | 15.246 | 1.00 | 11.82 |
|    | ATOM | 937 | CA  | PRO | A | 123 | 0 | 16.226 | 34.778 | 16.190 | 1.00 | 12.81 |
|    | ATOM | 938 | C   | PRO | A | 123 | 0 | 17.288 | 35.857 | 16.258 | 1.00 | 12.41 |
| 35 | ATOM | 939 | O   | PRO | A | 123 | 0 | 17.565 | 36.580 | 15.302 | 1.00 | 12.03 |
|    | ATOM | 940 | CB  | PRO | A | 123 | 0 | 16.833 | 33.416 | 15.713 | 1.00 | 12.34 |
|    | ATOM | 941 | CG  | PRO | A | 123 | 0 | 16.567 | 33.494 | 14.223 | 1.00 | 12.19 |
|    | ATOM | 942 | CD  | PRO | A | 123 | 0 | 15.283 | 34.289 | 14.021 | 1.00 | 11.35 |

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|           |      |     |     |           |   |        |        |        |      |       |
|-----------|------|-----|-----|-----------|---|--------|--------|--------|------|-------|
|           | ATOM | 943 | N   | MET A 124 | 0 | 17.903 | 36.027 | 17.431 | 1.00 | 14.30 |
|           | ATOM | 944 | CA  | MET A 124 | 0 | 18.959 | 37.024 | 17.628 | 1.00 | 14.19 |
|           | ATOM | 945 | C   | MET A 124 | 0 | 20.040 | 36.414 | 18.528 | 1.00 | 15.37 |
|           | ATOM | 946 | O   | MET A 124 | 0 | 19.788 | 36.067 | 19.690 | 1.00 | 15.41 |
| 5         | ATOM | 947 | CB  | MET A 124 | 0 | 18.411 | 38.290 | 18.242 | 1.00 | 15.94 |
|           | ATOM | 948 | CG  | MET A 124 | 0 | 19.464 | 39.345 | 18.604 | 1.00 | 19.30 |
|           | ATOM | 949 | SD  | MET A 124 | 0 | 18.646 | 40.875 | 19.164 | 1.00 | 21.94 |
|           | ATOM | 950 | CE  | MET A 124 | 0 | 19.918 | 42.061 | 18.729 | 1.00 | 23.64 |
|           | ATOM | 951 | N   | VAL A 125 | 0 | 21.212 | 36.178 | 17.939 | 1.00 | 13.74 |
| 10        | ATOM | 952 | CA  | VAL A 125 | 0 | 22.282 | 35.479 | 18.658 | 1.00 | 13.87 |
|           | ATOM | 953 | C   | VAL A 125 | 0 | 23.478 | 36.390 | 18.872 | 1.00 | 13.68 |
|           | ATOM | 954 | O   | VAL A 125 | 0 | 24.004 | 36.976 | 17.945 | 1.00 | 14.01 |
|           | ATOM | 955 | CB  | VAL A 125 | 0 | 22.672 | 34.139 | 18.005 | 1.00 | 12.58 |
|           | ATOM | 956 | CG1 | VAL A 125 | 0 | 23.787 | 33.383 | 18.749 | 1.00 | 11.23 |
| 15        | ATOM | 957 | CG2 | VAL A 125 | 0 | 21.448 | 33.212 | 18.033 | 1.00 | 12.14 |
| 586937.20 | ATOM | 958 | N   | ILE A 126 | 0 | 23.860 | 36.535 | 20.135 | 1.00 | 14.48 |
| "070504   | ATOM | 959 | CA  | ILE A 126 | 0 | 25.016 | 37.295 | 20.557 | 1.00 | 14.53 |
|           | ATOM | 960 | C   | ILE A 126 | 0 | 26.131 | 36.348 | 21.054 | 1.00 | 13.58 |
|           | ATOM | 961 | O   | ILE A 126 | 0 | 26.061 | 35.791 | 22.154 | 1.00 | 12.93 |
|           | ATOM | 962 | CB  | ILE A 126 | 0 | 24.649 | 38.295 | 21.662 | 1.00 | 14.95 |
|           | ATOM | 963 | CG1 | ILE A 126 | 0 | 23.563 | 39.302 | 21.254 | 1.00 | 15.29 |
|           | ATOM | 964 | CG2 | ILE A 126 | 0 | 25.901 | 39.014 | 22.174 | 1.00 | 14.24 |
|           | ATOM | 965 | CD1 | ILE A 126 | 0 | 23.703 | 39.905 | 19.896 | 1.00 | 15.84 |
| 25        | ATOM | 966 | N   | TYR A 127 | 0 | 27.142 | 36.146 | 20.236 | 1.00 | 13.66 |
|           | ATOM | 967 | CA  | TYR A 127 | 0 | 28.278 | 35.258 | 20.529 | 1.00 | 14.62 |
|           | ATOM | 968 | C   | TYR A 127 | 0 | 29.328 | 35.778 | 21.507 | 1.00 | 15.97 |
|           | ATOM | 969 | O   | TYR A 127 | 0 | 29.626 | 36.977 | 21.669 | 1.00 | 15.27 |
|           | ATOM | 970 | CB  | TYR A 127 | 0 | 28.965 | 34.939 | 19.176 | 1.00 | 14.97 |
|           | ATOM | 971 | CG  | TYR A 127 | 0 | 28.057 | 34.136 | 18.272 | 1.00 | 16.10 |
| 30        | ATOM | 972 | CD1 | TYR A 127 | 0 | 27.823 | 32.782 | 18.496 | 1.00 | 14.96 |
|           | ATOM | 973 | CD2 | TYR A 127 | 0 | 27.428 | 34.753 | 17.177 | 1.00 | 16.64 |
|           | ATOM | 974 | CE1 | TYR A 127 | 0 | 26.995 | 32.057 | 17.650 | 1.00 | 16.16 |
|           | ATOM | 975 | CE2 | TYR A 127 | 0 | 26.576 | 34.039 | 16.356 | 1.00 | 17.32 |
|           | ATOM | 976 | CZ  | TYR A 127 | 0 | 26.374 | 32.692 | 16.592 | 1.00 | 18.16 |
| 35        | ATOM | 977 | OH  | TYR A 127 | 0 | 25.540 | 31.971 | 15.756 | 1.00 | 20.32 |
|           | ATOM | 978 | N   | ASP A 128 | 0 | 29.892 | 34.895 | 22.312 | 1.00 | 14.36 |
|           | ATOM | 979 | CA  | ASP A 128 | 0 | 30.825 | 35.269 | 23.365 | 1.00 | 16.80 |
|           | ATOM | 980 | C   | ASP A 128 | 0 | 32.222 | 34.863 | 22.939 | 1.00 | 20.11 |

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|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 981  | O   | ASP | A | 128 | 0 | 32.508 | 33.656 | 22.777 | 1.00 | 21.41 |
|    | ATOM | 982  | CB  | ASP | A | 128 | 0 | 30.398 | 34.568 | 24.649 | 1.00 | 16.65 |
|    | ATOM | 983  | CG  | ASP | A | 128 | 0 | 31.136 | 35.055 | 25.874 | 1.00 | 18.36 |
|    | ATOM | 984  | OD1 | ASP | A | 128 | 0 | 32.194 | 35.708 | 25.750 | 1.00 | 18.72 |
| 5  | ATOM | 985  | OD2 | ASP | A | 128 | 0 | 30.710 | 34.819 | 27.024 | 1.00 | 20.03 |
|    | ATOM | 986  | N   | ASP | A | 129 | 0 | 33.148 | 35.798 | 22.771 | 1.00 | 22.30 |
|    | ATOM | 987  | CA  | ASP | A | 129 | 0 | 34.511 | 35.389 | 22.377 | 1.00 | 24.39 |
|    | ATOM | 988  | C   | ASP | A | 129 | 0 | 35.282 | 34.740 | 23.509 | 1.00 | 22.47 |
|    | ATOM | 989  | O   | ASP | A | 129 | 0 | 36.275 | 34.096 | 23.209 | 1.00 | 23.18 |
| 10 | ATOM | 990  | CB  | ASP | A | 129 | 0 | 35.298 | 36.490 | 21.707 | 1.00 | 28.46 |
|    | ATOM | 991  | CG  | ASP | A | 129 | 0 | 35.372 | 37.764 | 22.516 | 1.00 | 31.10 |
|    | ATOM | 992  | OD1 | ASP | A | 129 | 0 | 35.254 | 37.652 | 23.747 | 1.00 | 32.87 |
|    | ATOM | 993  | OD2 | ASP | A | 129 | 0 | 35.553 | 38.824 | 21.891 | 1.00 | 34.70 |
|    | ATOM | 994  | N   | ASN | A | 130 | 0 | 34.829 | 34.684 | 24.736 | 1.00 | 21.92 |
| 15 | ATOM | 995  | CA  | ASN | A | 130 | 0 | 35.368 | 34.015 | 25.874 | 1.00 | 23.74 |
|    | ATOM | 996  | C   | ASN | A | 130 | 0 | 34.382 | 32.976 | 26.417 | 1.00 | 23.02 |
|    | ATOM | 997  | O   | ASN | A | 130 | 0 | 34.352 | 32.684 | 27.616 | 1.00 | 20.14 |
|    | ATOM | 998  | CB  | ASN | A | 130 | 0 | 35.686 | 35.002 | 27.028 | 1.00 | 26.41 |
|    | ATOM | 999  | CG  | ASN | A | 130 | 0 | 36.583 | 36.127 | 26.550 | 1.00 | 30.99 |
| 20 | ATOM | 1000 | OD1 | ASN | A | 130 | 0 | 36.187 | 37.309 | 26.486 | 1.00 | 33.20 |
|    | ATOM | 1001 | ND2 | ASN | A | 130 | 0 | 37.818 | 35.769 | 26.175 | 1.00 | 30.96 |
|    | ATOM | 1002 | N   | ASP | A | 131 | 0 | 33.533 | 32.401 | 25.561 | 1.00 | 23.32 |
|    | ATOM | 1003 | CA  | ASP | A | 131 | 0 | 32.476 | 31.543 | 26.127 | 1.00 | 21.63 |
|    | ATOM | 1004 | C   | ASP | A | 131 | 0 | 33.010 | 30.514 | 27.103 | 1.00 | 19.56 |
|    | ATOM | 1005 | O   | ASP | A | 131 | 0 | 33.704 | 29.569 | 26.766 | 1.00 | 19.71 |
|    | ATOM | 1006 | CB  | ASP | A | 131 | 0 | 31.594 | 30.877 | 25.063 | 1.00 | 22.97 |
|    | ATOM | 1007 | CG  | ASP | A | 131 | 0 | 30.220 | 30.487 | 25.591 | 1.00 | 24.48 |
|    | ATOM | 1008 | OD1 | ASP | A | 131 | 0 | 30.181 | 29.525 | 26.397 | 1.00 | 26.42 |
|    | ATOM | 1009 | OD2 | ASP | A | 131 | 0 | 29.166 | 31.051 | 25.212 | 1.00 | 22.66 |
| 30 | ATOM | 1010 | N   | PRO | A | 132 | 0 | 32.491 | 30.548 | 28.315 | 1.00 | 18.77 |
|    | ATOM | 1011 | CA  | PRO | A | 132 | 0 | 32.759 | 29.611 | 29.381 | 1.00 | 19.41 |
|    | ATOM | 1012 | C   | PRO | A | 132 | 0 | 32.523 | 28.141 | 29.031 | 1.00 | 20.89 |
|    | ATOM | 1013 | O   | PRO | A | 132 | 0 | 33.112 | 27.250 | 29.672 | 1.00 | 19.99 |
|    | ATOM | 1014 | CB  | PRO | A | 132 | 0 | 31.799 | 29.990 | 30.531 | 1.00 | 18.42 |
| 35 | ATOM | 1015 | CG  | PRO | A | 132 | 0 | 31.589 | 31.470 | 30.263 | 1.00 | 16.87 |
|    | ATOM | 1016 | CD  | PRO | A | 132 | 0 | 31.645 | 31.673 | 28.778 | 1.00 | 16.73 |
|    | ATOM | 1017 | N   | HIS | A | 133 | 0 | 31.668 | 27.836 | 28.063 | 1.00 | 19.47 |
|    | ATOM | 1018 | CA  | HIS | A | 133 | 0 | 31.331 | 26.465 | 27.700 | 1.00 | 18.79 |

|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
| 5  | ATOM | 1019 | C   | HIS | A | 133 | 0 | 31.887 | 26.014 | 26.372 | 1.00 | 19.35 |
|    | ATOM | 1020 | O   | HIS | A | 133 | 0 | 31.503 | 24.954 | 25.826 | 1.00 | 18.60 |
|    | ATOM | 1021 | CB  | HIS | A | 133 | 0 | 29.789 | 26.428 | 27.536 | 1.00 | 18.91 |
|    | ATOM | 1022 | CG  | HIS | A | 133 | 0 | 29.065 | 26.242 | 28.815 | 1.00 | 18.13 |
|    | ATOM | 1023 | ND1 | HIS | A | 133 | 0 | 29.566 | 25.551 | 29.877 | 1.00 | 19.52 |
|    | ATOM | 1024 | CD2 | HIS | A | 133 | 0 | 27.817 | 26.625 | 29.183 | 1.00 | 19.38 |
|    | ATOM | 1025 | CE1 | HIS | A | 133 | 0 | 28.679 | 25.530 | 30.855 | 1.00 | 20.08 |
|    | ATOM | 1026 | NE2 | HIS | A | 133 | 0 | 27.587 | 26.180 | 30.457 | 1.00 | 19.60 |
| 10 | ATOM | 1027 | N   | ALA | A | 134 | 0 | 32.840 | 26.801 | 25.852 | 1.00 | 19.40 |
|    | ATOM | 1028 | CA  | ALA | A | 134 | 0 | 33.413 | 26.465 | 24.552 | 1.00 | 21.88 |
|    | ATOM | 1029 | C   | ALA | A | 134 | 0 | 34.080 | 25.107 | 24.525 | 1.00 | 21.69 |
|    | ATOM | 1030 | O   | ALA | A | 134 | 0 | 34.120 | 24.514 | 23.439 | 1.00 | 21.61 |
|    | ATOM | 1031 | CB  | ALA | A | 134 | 0 | 34.418 | 27.548 | 24.128 | 1.00 | 22.55 |
|    | ATOM | 1032 | N   | ALA | A | 135 | 0 | 34.582 | 24.527 | 25.622 | 1.00 | 21.96 |
|    | ATOM | 1033 | CA  | ALA | A | 135 | 0 | 35.178 | 23.192 | 25.483 | 1.00 | 23.53 |
|    | ATOM | 1034 | C   | ALA | A | 135 | 0 | 34.144 | 22.096 | 25.232 | 1.00 | 24.47 |
| 20 | ATOM | 1035 | O   | ALA | A | 135 | 0 | 34.488 | 20.936 | 24.989 | 1.00 | 24.77 |
|    | ATOM | 1036 | CB  | ALA | A | 135 | 0 | 35.910 | 22.820 | 26.776 | 1.00 | 21.92 |
|    | ATOM | 1037 | N   | LEU | A | 136 | 0 | 32.862 | 22.375 | 25.457 | 1.00 | 24.95 |
|    | ATOM | 1038 | CA  | LEU | A | 136 | 0 | 31.800 | 21.376 | 25.404 | 1.00 | 23.15 |
|    | ATOM | 1039 | C   | LEU | A | 136 | 0 | 31.284 | 21.076 | 24.016 | 1.00 | 20.31 |
|    | ATOM | 1040 | O   | LEU | A | 136 | 0 | 30.609 | 20.054 | 23.924 | 1.00 | 19.62 |
|    | ATOM | 1041 | CB  | LEU | A | 136 | 0 | 30.665 | 21.845 | 26.318 | 1.00 | 24.43 |
|    | ATOM | 1042 | CG  | LEU | A | 136 | 0 | 30.501 | 21.211 | 27.686 | 1.00 | 27.55 |
| 30 | ATOM | 1043 | CD1 | LEU | A | 136 | 0 | 31.803 | 20.721 | 28.285 | 1.00 | 25.75 |
|    | ATOM | 1044 | CD2 | LEU | A | 136 | 0 | 29.747 | 22.129 | 28.644 | 1.00 | 26.92 |
|    | ATOM | 1045 | N   | TYR | A | 137 | 0 | 31.565 | 21.888 | 22.998 | 1.00 | 17.05 |
|    | ATOM | 1046 | CA  | TYR | A | 137 | 0 | 31.085 | 21.612 | 21.662 | 1.00 | 16.65 |
|    | ATOM | 1047 | C   | TYR | A | 137 | 0 | 32.076 | 22.054 | 20.599 | 1.00 | 17.99 |
|    | ATOM | 1048 | O   | TYR | A | 137 | 0 | 32.965 | 22.891 | 20.794 | 1.00 | 18.69 |
|    | ATOM | 1049 | CB  | TYR | A | 137 | 0 | 29.724 | 22.319 | 21.402 | 1.00 | 16.73 |
|    | ATOM | 1050 | CG  | TYR | A | 137 | 0 | 29.711 | 23.760 | 21.857 | 1.00 | 16.24 |
| 35 | ATOM | 1051 | CD1 | TYR | A | 137 | 0 | 29.302 | 24.108 | 23.150 | 1.00 | 16.00 |
|    | ATOM | 1052 | CD2 | TYR | A | 137 | 0 | 30.159 | 24.754 | 21.001 | 1.00 | 14.76 |
|    | ATOM | 1053 | CE1 | TYR | A | 137 | 0 | 29.355 | 25.448 | 23.551 | 1.00 | 15.32 |
|    | ATOM | 1054 | CE2 | TYR | A | 137 | 0 | 30.165 | 26.081 | 21.396 | 1.00 | 15.52 |
|    | ATOM | 1055 | CZ  | TYR | A | 137 | 0 | 29.759 | 26.410 | 22.675 | 1.00 | 15.61 |
|    | ATOM | 1056 | OH  | TYR | A | 137 | 0 | 29.782 | 27.731 | 23.055 | 1.00 | 17.56 |

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|    |      |      |     |           |   |        |        |        |      |       |
|----|------|------|-----|-----------|---|--------|--------|--------|------|-------|
|    | ATOM | 1057 | N   | ASP A 138 | 0 | 31.903 | 21.549 | 19.393 | 1.00 | 19.04 |
|    | ATOM | 1058 | CA  | ASP A 138 | 0 | 32.733 | 21.859 | 18.253 | 1.00 | 20.02 |
|    | ATOM | 1059 | C   | ASP A 138 | 0 | 32.139 | 22.933 | 17.364 | 1.00 | 21.05 |
|    | ATOM | 1060 | O   | ASP A 138 | 0 | 32.911 | 23.553 | 16.631 | 1.00 | 21.98 |
| 5  | ATOM | 1061 | CB  | ASP A 138 | 0 | 32.836 | 20.628 | 17.315 | 1.00 | 20.66 |
|    | ATOM | 1062 | CG  | ASP A 138 | 0 | 33.355 | 19.455 | 18.089 | 1.00 | 22.79 |
|    | ATOM | 1063 | OD1 | ASP A 138 | 0 | 32.744 | 18.404 | 18.318 | 1.00 | 24.88 |
|    | ATOM | 1064 | OD2 | ASP A 138 | 0 | 34.481 | 19.675 | 18.581 | 1.00 | 25.34 |
|    | ATOM | 1065 | N   | GLU A 139 | 0 | 30.825 | 22.957 | 17.184 | 1.00 | 19.73 |
| 10 | ATOM | 1066 | CA  | GLU A 139 | 0 | 30.223 | 23.865 | 16.213 | 1.00 | 21.27 |
|    | ATOM | 1067 | C   | GLU A 139 | 0 | 29.086 | 24.668 | 16.825 | 1.00 | 18.97 |
|    | ATOM | 1068 | O   | GLU A 139 | 0 | 28.306 | 24.143 | 17.608 | 1.00 | 16.95 |
|    | ATOM | 1069 | CB  | GLU A 139 | 0 | 29.617 | 23.164 | 15.000 | 1.00 | 24.71 |
|    | ATOM | 1070 | CG  | GLU A 139 | 0 | 30.509 | 22.149 | 14.311 | 1.00 | 30.89 |
| 15 | ATOM | 1071 | CD  | GLU A 139 | 0 | 31.633 | 22.868 | 13.587 | 1.00 | 34.42 |
|    | ATOM | 1072 | OE1 | GLU A 139 | 0 | 31.340 | 23.869 | 12.898 | 1.00 | 36.87 |
|    | ATOM | 1073 | OE2 | GLU A 139 | 0 | 32.794 | 22.457 | 13.705 | 1.00 | 37.60 |
|    | ATOM | 1074 | N   | ASP A 140 | 0 | 29.057 | 25.933 | 16.408 | 1.00 | 19.38 |
|    | ATOM | 1075 | CA  | ASP A 140 | 0 | 28.026 | 26.847 | 16.912 | 1.00 | 17.89 |
| 20 | ATOM | 1076 | C   | ASP A 140 | 0 | 27.858 | 27.901 | 15.837 | 1.00 | 18.87 |
|    | ATOM | 1077 | O   | ASP A 140 | 0 | 28.705 | 28.780 | 15.768 | 1.00 | 21.31 |
|    | ATOM | 1078 | CB  | ASP A 140 | 0 | 28.438 | 27.399 | 18.268 | 1.00 | 16.26 |
|    | ATOM | 1079 | CG  | ASP A 140 | 0 | 27.445 | 28.399 | 18.858 | 1.00 | 16.73 |
|    | ATOM | 1080 | OD1 | ASP A 140 | 0 | 27.854 | 29.143 | 19.781 | 1.00 | 14.86 |
| 25 | ATOM | 1081 | OD2 | ASP A 140 | 0 | 26.287 | 28.446 | 18.401 | 1.00 | 13.82 |
|    | ATOM | 1082 | N   | ASP A 141 | 0 | 26.862 | 27.844 | 14.972 | 1.00 | 17.34 |
|    | ATOM | 1083 | CA  | ASP A 141 | 0 | 26.750 | 28.859 | 13.937 | 1.00 | 19.52 |
|    | ATOM | 1084 | C   | ASP A 141 | 0 | 25.301 | 29.031 | 13.520 | 1.00 | 19.33 |
|    | ATOM | 1085 | O   | ASP A 141 | 0 | 24.342 | 28.513 | 14.115 | 1.00 | 17.91 |
| 30 | ATOM | 1086 | CB  | ASP A 141 | 0 | 27.681 | 28.509 | 12.772 | 1.00 | 21.66 |
|    | ATOM | 1087 | CG  | ASP A 141 | 0 | 27.384 | 27.151 | 12.193 | 1.00 | 24.87 |
|    | ATOM | 1088 | OD1 | ASP A 141 | 0 | 28.280 | 26.521 | 11.567 | 1.00 | 28.90 |
|    | ATOM | 1089 | OD2 | ASP A 141 | 0 | 26.271 | 26.604 | 12.302 | 1.00 | 25.89 |
|    | ATOM | 1090 | N   | GLU A 142 | 0 | 25.102 | 29.688 | 12.387 | 1.00 | 19.21 |
| 35 | ATOM | 1091 | CA  | GLU A 142 | 0 | 23.775 | 29.945 | 11.880 | 1.00 | 20.84 |
|    | ATOM | 1092 | C   | GLU A 142 | 0 | 23.052 | 28.636 | 11.592 | 1.00 | 19.95 |
|    | ATOM | 1093 | O   | GLU A 142 | 0 | 21.844 | 28.656 | 11.665 | 1.00 | 18.73 |
|    | ATOM | 1094 | CB  | GLU A 142 | 0 | 23.771 | 30.894 | 10.699 | 1.00 | 23.40 |

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|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 1095 | CG  | GLU | A | 142 | 0 | 24.295 | 30.301 | 9.407  | 1.00 | 27.22 |
|    | ATOM | 1096 | CD  | GLU | A | 142 | 0 | 25.718 | 30.826 | 9.221  | 1.00 | 32.36 |
|    | ATOM | 1097 | OE1 | GLU | A | 142 | 0 | 26.513 | 30.920 | 10.206 | 1.00 | 31.87 |
|    | ATOM | 1098 | OE2 | GLU | A | 142 | 0 | 25.968 | 31.136 | 8.023  | 1.00 | 35.76 |
| 5  | ATOM | 1099 | N   | ASN | A | 143 | 0 | 23.723 | 27.508 | 11.378 | 1.00 | 20.40 |
|    | ATOM | 1100 | CA  | ASN | A | 143 | 0 | 23.105 | 26.227 | 11.151 | 1.00 | 19.61 |
|    | ATOM | 1101 | C   | ASN | A | 143 | 0 | 22.785 | 25.468 | 12.421 | 1.00 | 18.35 |
|    | ATOM | 1102 | O   | ASN | A | 143 | 0 | 22.317 | 24.337 | 12.325 | 1.00 | 15.65 |
|    | ATOM | 1103 | CB  | ASN | A | 143 | 0 | 24.024 | 25.401 | 10.229 | 1.00 | 23.57 |
| 10 | ATOM | 1104 | CG  | ASN | A | 143 | 0 | 24.133 | 26.067 | 8.857  | 1.00 | 26.63 |
|    | ATOM | 1105 | OD1 | ASN | A | 143 | 0 | 25.220 | 26.376 | 8.356  | 1.00 | 29.89 |
|    | ATOM | 1106 | ND2 | ASN | A | 143 | 0 | 23.049 | 26.342 | 8.175  | 1.00 | 25.46 |
|    | ATOM | 1107 | N   | THR | A | 144 | 0 | 23.067 | 25.974 | 13.632 | 1.00 | 16.76 |
|    | ATOM | 1108 | CA  | THR | A | 144 | 0 | 22.678 | 25.257 | 14.825 | 1.00 | 15.40 |
|    | ATOM | 1109 | C   | THR | A | 144 | 0 | 21.556 | 25.976 | 15.577 | 1.00 | 15.58 |
|    | ATOM | 1110 | O   | THR | A | 144 | 0 | 21.361 | 25.776 | 16.789 | 1.00 | 17.88 |
|    | ATOM | 1111 | CB  | THR | A | 144 | 0 | 23.848 | 25.018 | 15.785 | 1.00 | 16.43 |
|    | ATOM | 1112 | OG1 | THR | A | 144 | 0 | 24.296 | 26.270 | 16.297 | 1.00 | 14.82 |
|    | ATOM | 1113 | CG2 | THR | A | 144 | 0 | 24.935 | 24.215 | 15.104 | 1.00 | 15.98 |
|    | ATOM | 1114 | N   | ILE | A | 145 | 0 | 20.821 | 26.834 | 14.898 | 1.00 | 13.92 |
|    | ATOM | 1115 | CA  | ILE | A | 145 | 0 | 19.697 | 27.550 | 15.500 | 1.00 | 14.31 |
|    | ATOM | 1116 | C   | ILE | A | 145 | 0 | 18.392 | 26.835 | 15.139 | 1.00 | 13.84 |
|    | ATOM | 1117 | O   | ILE | A | 145 | 0 | 18.127 | 26.478 | 13.996 | 1.00 | 12.32 |
|    | ATOM | 1118 | CB  | ILE | A | 145 | 0 | 19.641 | 29.016 | 15.011 | 1.00 | 15.15 |
|    | ATOM | 1119 | CG1 | ILE | A | 145 | 0 | 20.881 | 29.726 | 15.608 | 1.00 | 16.27 |
|    | ATOM | 1120 | CG2 | ILE | A | 145 | 0 | 18.346 | 29.736 | 15.375 | 1.00 | 13.14 |
|    | ATOM | 1121 | CD1 | ILE | A | 145 | 0 | 21.256 | 31.006 | 14.892 | 1.00 | 16.72 |
|    | ATOM | 1122 | N   | ILE | A | 146 | 0 | 17.550 | 26.644 | 16.141 | 1.00 | 13.54 |
|    | ATOM | 1123 | CA  | ILE | A | 146 | 0 | 16.263 | 25.983 | 15.926 | 1.00 | 13.70 |
| 30 | ATOM | 1124 | C   | ILE | A | 146 | 0 | 15.167 | 26.899 | 16.494 | 1.00 | 12.67 |
|    | ATOM | 1125 | O   | ILE | A | 146 | 0 | 15.155 | 27.082 | 17.714 | 1.00 | 10.09 |
|    | ATOM | 1126 | CB  | ILE | A | 146 | 0 | 16.183 | 24.580 | 16.553 | 1.00 | 15.97 |
|    | ATOM | 1127 | CG1 | ILE | A | 146 | 0 | 17.280 | 23.621 | 16.012 | 1.00 | 17.29 |
|    | ATOM | 1128 | CG2 | ILE | A | 146 | 0 | 14.831 | 23.937 | 16.207 | 1.00 | 14.52 |
| 35 | ATOM | 1129 | CD1 | ILE | A | 146 | 0 | 17.359 | 22.340 | 16.832 | 1.00 | 18.45 |
|    | ATOM | 1130 | N   | THR | A | 147 | 0 | 14.360 | 27.507 | 15.610 | 1.00 | 10.81 |
|    | ATOM | 1131 | CA  | THR | A | 147 | 0 | 13.240 | 28.310 | 16.102 | 1.00 | 12.54 |
|    | ATOM | 1132 | C   | THR | A | 147 | 0 | 11.912 | 27.526 | 15.988 | 1.00 | 13.55 |

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|    |      |      |     |           |   |        |        |        |      |       |
|----|------|------|-----|-----------|---|--------|--------|--------|------|-------|
|    | ATOM | 1133 | O   | THR A 147 | 0 | 11.655 | 26.724 | 15.076 | 1.00 | 12.65 |
|    | ATOM | 1134 | CB  | THR A 147 | 0 | 13.078 | 29.642 | 15.351 | 1.00 | 12.37 |
|    | ATOM | 1135 | OG1 | THR A 147 | 0 | 12.728 | 29.311 | 14.005 | 1.00 | 10.17 |
|    | ATOM | 1136 | CG2 | THR A 147 | 0 | 14.381 | 30.479 | 15.402 | 1.00 | 11.93 |
| 5  | ATOM | 1137 | N   | LEU A 148 | 0 | 11.062 | 27.715 | 16.972 | 1.00 | 12.48 |
|    | ATOM | 1138 | CA  | LEU A 148 | 0 | 9.719  | 27.171 | 17.039 | 1.00 | 13.90 |
|    | ATOM | 1139 | C   | LEU A 148 | 0 | 8.719  | 28.350 | 16.916 | 1.00 | 15.44 |
|    | ATOM | 1140 | O   | LEU A 148 | 0 | 8.860  | 29.383 | 17.579 | 1.00 | 15.28 |
|    | ATOM | 1141 | CB  | LEU A 148 | 0 | 9.501  | 26.419 | 18.340 | 1.00 | 12.83 |
| 10 | ATOM | 1142 | CG  | LEU A 148 | 0 | 10.502 | 25.293 | 18.669 | 1.00 | 12.45 |
|    | ATOM | 1143 | CD1 | LEU A 148 | 0 | 10.154 | 24.669 | 19.997 | 1.00 | 11.49 |
|    | ATOM | 1144 | CD2 | LEU A 148 | 0 | 10.552 | 24.203 | 17.597 | 1.00 | 11.82 |
|    | ATOM | 1145 | N   | ALA A 149 | 0 | 7.726  | 28.241 | 16.053 | 1.00 | 14.08 |
|    | ATOM | 1146 | CA  | ALA A 149 | 0 | 6.725  | 29.256 | 15.825 | 1.00 | 15.37 |
| 15 | ATOM | 1147 | C   | ALA A 149 | 0 | 5.336  | 28.658 | 15.521 | 1.00 | 16.78 |
|    | ATOM | 1148 | O   | ALA A 149 | 0 | 5.198  | 27.637 | 14.841 | 1.00 | 15.78 |
|    | ATOM | 1149 | CB  | ALA A 149 | 0 | 7.068  | 30.127 | 14.628 | 1.00 | 13.22 |
|    | ATOM | 1150 | N   | ASP A 150 | 0 | 4.337  | 29.344 | 16.065 | 1.00 | 16.39 |
|    | ATOM | 1151 | CA  | ASP A 150 | 0 | 2.941  | 28.995 | 15.864 | 1.00 | 15.96 |
| 20 | ATOM | 1152 | C   | ASP A 150 | 0 | 2.515  | 29.758 | 14.624 | 1.00 | 16.53 |
|    | ATOM | 1153 | O   | ASP A 150 | 0 | 2.960  | 30.905 | 14.483 | 1.00 | 18.17 |
|    | ATOM | 1154 | CB  | ASP A 150 | 0 | 2.066  | 29.440 | 17.027 | 1.00 | 16.78 |
|    | ATOM | 1155 | CG  | ASP A 150 | 0 | 2.345  | 30.836 | 17.561 | 1.00 | 18.15 |
|    | ATOM | 1156 | OD1 | ASP A 150 | 0 | 3.410  | 31.472 | 17.347 | 1.00 | 16.29 |
| 25 | ATOM | 1157 | OD2 | ASP A 150 | 0 | 1.414  | 31.311 | 18.264 | 1.00 | 17.83 |
|    | ATOM | 1158 | N   | TRP A 151 | 0 | 1.776  | 29.157 | 13.726 | 1.00 | 15.62 |
|    | ATOM | 1159 | CA  | TRP A 151 | 0 | 1.366  | 29.828 | 12.499 | 1.00 | 14.37 |
|    | ATOM | 1160 | C   | TRP A 151 | 0 | -0.140 | 29.688 | 12.226 | 1.00 | 14.78 |
|    | ATOM | 1161 | O   | TRP A 151 | 0 | -0.679 | 28.607 | 12.425 | 1.00 | 13.41 |
| 30 | ATOM | 1162 | CB  | TRP A 151 | 0 | 2.229  | 29.239 | 11.373 | 1.00 | 13.56 |
|    | ATOM | 1163 | CG  | TRP A 151 | 0 | 2.046  | 30.004 | 10.097 | 1.00 | 13.31 |
|    | ATOM | 1164 | CD1 | TRP A 151 | 0 | 1.385  | 29.545 | 8.991  | 1.00 | 13.60 |
|    | ATOM | 1165 | CD2 | TRP A 151 | 0 | 2.484  | 31.316 | 9.806  | 1.00 | 15.46 |
|    | ATOM | 1166 | NE1 | TRP A 151 | 0 | 1.412  | 30.497 | 8.017  | 1.00 | 14.49 |
| 35 | ATOM | 1167 | CE2 | TRP A 151 | 0 | 2.061  | 31.605 | 8.473  | 1.00 | 15.53 |
|    | ATOM | 1168 | CE3 | TRP A 151 | 0 | 3.189  | 32.294 | 10.522 | 1.00 | 16.28 |
|    | ATOM | 1169 | CZ2 | TRP A 151 | 0 | 2.306  | 32.822 | 7.846  | 1.00 | 16.57 |
|    | ATOM | 1170 | CZ3 | TRP A 151 | 0 | 3.436  | 33.505 | 9.881  | 1.00 | 18.22 |



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|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 1171 | CH2 | TRP | A | 151 | 0 | 3.003  | 33.766 | 8.560  | 1.00 | 18.00 |
|    | ATOM | 1172 | N   | TYR | A | 152 | 0 | -0.818 | 30.745 | 11.812 | 1.00 | 15.59 |
|    | ATOM | 1173 | CA  | TYR | A | 152 | 0 | -2.266 | 30.813 | 11.614 | 1.00 | 17.47 |
|    | ATOM | 1174 | C   | TYR | A | 152 | 0 | -2.556 | 31.086 | 10.149 | 1.00 | 18.79 |
| 5  | ATOM | 1175 | O   | TYR | A | 152 | 0 | -1.830 | 31.856 | 9.521  | 1.00 | 19.15 |
|    | ATOM | 1176 | CB  | TYR | A | 152 | 0 | -2.981 | 31.930 | 12.434 | 1.00 | 16.37 |
|    | ATOM | 1177 | CG  | TYR | A | 152 | 0 | -2.539 | 31.776 | 13.887 | 1.00 | 16.24 |
|    | ATOM | 1178 | CD1 | TYR | A | 152 | 0 | -1.313 | 32.303 | 14.318 | 1.00 | 15.22 |
|    | ATOM | 1179 | CD2 | TYR | A | 152 | 0 | -3.267 | 30.998 | 14.767 | 1.00 | 15.29 |
| 10 | ATOM | 1180 | CE1 | TYR | A | 152 | 0 | -0.889 | 32.135 | 15.626 | 1.00 | 14.67 |
|    | ATOM | 1181 | CE2 | TYR | A | 152 | 0 | -2.831 | 30.799 | 16.054 | 1.00 | 16.52 |
|    | ATOM | 1182 | CZ  | TYR | A | 152 | 0 | -1.632 | 31.369 | 16.474 | 1.00 | 16.12 |
|    | ATOM | 1183 | OH  | TYR | A | 152 | 0 | -1.219 | 31.139 | 17.771 | 1.00 | 16.36 |
|    | ATOM | 1184 | N   | HIS | A | 153 | 0 | -3.590 | 30.445 | 9.599  | 1.00 | 20.39 |
| 15 | ATOM | 1185 | CA  | HIS | A | 153 | 0 | -3.899 | 30.683 | 8.181  | 1.00 | 21.90 |
|    | ATOM | 1186 | C   | HIS | A | 153 | 0 | -4.642 | 31.988 | 7.952  | 1.00 | 21.94 |
|    | ATOM | 1187 | O   | HIS | A | 153 | 0 | -4.750 | 32.386 | 6.784  | 1.00 | 22.32 |
|    | ATOM | 1188 | CB  | HIS | A | 153 | 0 | -4.592 | 29.483 | 7.549  | 1.00 | 22.29 |
|    | ATOM | 1189 | CG  | HIS | A | 153 | 0 | -3.651 | 28.319 | 7.385  | 1.00 | 24.52 |
| 20 | ATOM | 1190 | ND1 | HIS | A | 153 | 0 | -4.071 | 27.022 | 7.258  | 1.00 | 24.25 |
|    | ATOM | 1191 | CD2 | HIS | A | 153 | 0 | -2.286 | 28.274 | 7.338  | 1.00 | 23.32 |
|    | ATOM | 1192 | CE1 | HIS | A | 153 | 0 | -3.034 | 26.220 | 7.124  | 1.00 | 24.15 |
|    | ATOM | 1193 | NE2 | HIS | A | 153 | 0 | -1.956 | 26.965 | 7.178  | 1.00 | 24.30 |
| 25 | ATOM | 1194 | N   | ILE | A | 154 | 0 | -5.084 | 32.718 | 8.972  | 1.00 | 21.86 |
|    | ATOM | 1195 | CA  | ILE | A | 154 | 0 | -5.611 | 34.046 | 8.686  | 1.00 | 24.39 |
|    | ATOM | 1196 | C   | ILE | A | 154 | 0 | -4.904 | 35.051 | 9.597  | 1.00 | 22.15 |
|    | ATOM | 1197 | O   | ILE | A | 154 | 0 | -4.517 | 34.732 | 10.698 | 1.00 | 20.15 |
|    | ATOM | 1198 | CB  | ILE | A | 154 | 0 | -7.120 | 34.281 | 8.693  | 1.00 | 26.43 |
|    | ATOM | 1199 | CG1 | ILE | A | 154 | 0 | -7.682 | 34.498 | 10.099 | 1.00 | 27.66 |
| 30 | ATOM | 1200 | CG2 | ILE | A | 154 | 0 | -7.947 | 33.251 | 7.928  | 1.00 | 26.60 |
|    | ATOM | 1201 | CD1 | ILE | A | 154 | 0 | -7.312 | 33.468 | 11.125 | 1.00 | 28.86 |
|    | ATOM | 1202 | N   | PRO | A | 155 | 0 | -4.723 | 36.255 | 9.105  | 1.00 | 23.79 |
|    | ATOM | 1203 | CA  | PRO | A | 155 | 0 | -4.108 | 37.361 | 9.816  | 1.00 | 23.66 |
|    | ATOM | 1204 | C   | PRO | A | 155 | 0 | -4.604 | 37.435 | 11.252 | 1.00 | 24.59 |
| 35 | ATOM | 1205 | O   | PRO | A | 155 | 0 | -5.814 | 37.317 | 11.539 | 1.00 | 24.53 |
|    | ATOM | 1206 | CB  | PRO | A | 155 | 0 | -4.546 | 38.634 | 9.077  | 1.00 | 24.20 |
|    | ATOM | 1207 | CG  | PRO | A | 155 | 0 | -4.990 | 38.162 | 7.733  | 1.00 | 23.40 |
|    | ATOM | 1208 | CD  | PRO | A | 155 | 0 | -5.207 | 36.672 | 7.776  | 1.00 | 23.41 |

|    |      |      |     |           |   |         |        |        |      |       |
|----|------|------|-----|-----------|---|---------|--------|--------|------|-------|
|    | ATOM | 1209 | N   | ALA A 156 | 0 | -3.704  | 37.776 | 12.178 | 1.00 | 24.03 |
|    | ATOM | 1210 | CA  | ALA A 156 | 0 | -4.066  | 37.806 | 13.588 | 1.00 | 25.45 |
|    | ATOM | 1211 | C   | ALA A 156 | 0 | -5.262  | 38.667 | 13.992 | 1.00 | 24.85 |
|    | ATOM | 1212 | O   | ALA A 156 | 0 | -6.083  | 38.217 | 14.798 | 1.00 | 22.79 |
| 5  | ATOM | 1213 | CB  | ALA A 156 | 0 | -2.866  | 38.045 | 14.492 | 1.00 | 24.30 |
|    | ATOM | 1214 | N   | PRO A 157 | 0 | -5.393  | 39.873 | 13.518 | 1.00 | 25.98 |
|    | ATOM | 1215 | CA  | PRO A 157 | 0 | -6.521  | 40.741 | 13.807 | 1.00 | 28.77 |
|    | ATOM | 1216 | C   | PRO A 157 | 0 | -7.840  | 40.092 | 13.406 | 1.00 | 30.78 |
|    | ATOM | 1217 | O   | PRO A 157 | 0 | -8.798  | 40.416 | 14.105 | 1.00 | 34.62 |
| 10 | ATOM | 1218 | CB  | PRO A 157 | 0 | -6.324  | 42.071 | 13.068 | 1.00 | 26.56 |
|    | ATOM | 1219 | CG  | PRO A 157 | 0 | -4.859  | 42.013 | 12.762 | 1.00 | 25.98 |
|    | ATOM | 1220 | CD  | PRO A 157 | 0 | -4.480  | 40.547 | 12.585 | 1.00 | 25.96 |
|    | ATOM | 1221 | N   | SER A 158 | 0 | -7.950  | 39.207 | 12.430 | 1.00 | 30.95 |
|    | ATOM | 1222 | CA  | SER A 158 | 0 | -9.174  | 38.549 | 12.047 | 1.00 | 31.32 |
| 15 | ATOM | 1223 | C   | SER A 158 | 0 | -9.450  | 37.288 | 12.851 | 1.00 | 33.61 |
| 20 | ATOM | 1224 | O   | SER A 158 | 0 | -10.472 | 36.633 | 12.575 | 1.00 | 34.71 |
| 25 | ATOM | 1225 | CB  | SER A 158 | 0 | -9.176  | 38.118 | 10.577 | 1.00 | 30.14 |
|    | ATOM | 1226 | OG  | SER A 158 | 0 | -8.942  | 39.187 | 9.665  | 1.00 | 31.20 |
|    | ATOM | 1227 | N   | ILE A 159 | 0 | -8.588  | 36.875 | 13.773 | 1.00 | 34.23 |
|    | ATOM | 1228 | CA  | ILE A 159 | 0 | -8.918  | 35.642 | 14.491 | 1.00 | 36.40 |
|    | ATOM | 1229 | C   | ILE A 159 | 0 | -10.189 | 35.896 | 15.309 | 1.00 | 39.20 |
|    | ATOM | 1230 | O   | ILE A 159 | 0 | -10.294 | 36.875 | 16.046 | 1.00 | 39.00 |
|    | ATOM | 1231 | CB  | ILE A 159 | 0 | -7.769  | 35.121 | 15.360 | 1.00 | 35.56 |
|    | ATOM | 1232 | CG1 | ILE A 159 | 0 | -6.713  | 34.408 | 14.485 | 1.00 | 35.58 |
|    | ATOM | 1233 | CG2 | ILE A 159 | 0 | -8.262  | 34.184 | 16.452 | 1.00 | 34.97 |
|    | ATOM | 1234 | CD1 | ILE A 159 | 0 | -5.388  | 34.268 | 15.212 | 1.00 | 34.91 |
|    | ATOM | 1235 | N   | GLN A 160 | 0 | -11.137 | 34.969 | 15.196 | 1.00 | 41.53 |
|    | ATOM | 1236 | CA  | GLN A 160 | 0 | -12.398 | 35.056 | 15.946 | 1.00 | 42.57 |
|    | ATOM | 1237 | C   | GLN A 160 | 0 | -12.466 | 33.914 | 16.949 | 1.00 | 40.51 |
| 30 | ATOM | 1238 | O   | GLN A 160 | 0 | -12.308 | 32.741 | 16.585 | 1.00 | 41.96 |
|    | ATOM | 1239 | CB  | GLN A 160 | 0 | -13.542 | 35.062 | 14.937 | 1.00 | 45.52 |
|    | ATOM | 1240 | CG  | GLN A 160 | 0 | -14.814 | 34.319 | 15.267 | 1.00 | 48.48 |
|    | ATOM | 1241 | CD  | GLN A 160 | 0 | -15.570 | 33.799 | 14.055 | 1.00 | 50.12 |
|    | ATOM | 1242 | OE1 | GLN A 160 | 0 | -16.204 | 32.737 | 14.118 | 1.00 | 50.77 |
| 35 | ATOM | 1243 | NE2 | GLN A 160 | 0 | -15.504 | 34.520 | 12.940 | 1.00 | 51.22 |
|    | ATOM | 1244 | N   | GLY A 161 | 0 | -12.667 | 34.191 | 18.225 | 1.00 | 37.10 |
|    | ATOM | 1245 | CA  | GLY A 161 | 0 | -12.722 | 33.112 | 19.208 | 1.00 | 34.91 |
|    | ATOM | 1246 | C   | GLY A 161 | 0 | -11.305 | 32.826 | 19.696 | 1.00 | 34.13 |

|      |      |     |     |   |     |   |         |        |        |      |       |
|------|------|-----|-----|---|-----|---|---------|--------|--------|------|-------|
| ATOM | 1247 | O   | GLY | A | 161 | 0 | -10.412 | 33.648 | 19.451 | 1.00 | 32.40 |
| ATOM | 1248 | N   | ALA | A | 162 | 0 | -11.158 | 31.738 | 20.433 | 1.00 | 33.01 |
| ATOM | 1249 | CA  | ALA | A | 162 | 0 | -9.864  | 31.355 | 20.988 | 1.00 | 32.39 |
| ATOM | 1250 | C   | ALA | A | 162 | 0 | -8.927  | 30.902 | 19.880 | 1.00 | 31.53 |
| ATOM | 1251 | O   | ALA | A | 162 | 0 | -9.285  | 30.132 | 19.013 | 1.00 | 30.73 |
| ATOM | 1252 | CB  | ALA | A | 162 | 0 | -10.058 | 30.263 | 22.010 | 1.00 | 34.12 |
| ATOM | 1253 | N   | ALA | A | 163 | 0 | -7.731  | 31.475 | 19.851 | 1.00 | 32.06 |
| ATOM | 1254 | CA  | ALA | A | 163 | 0 | -6.740  | 31.202 | 18.814 | 1.00 | 30.85 |
| ATOM | 1255 | C   | ALA | A | 163 | 0 | -6.219  | 29.774 | 18.897 | 1.00 | 29.40 |
| ATOM | 1256 | O   | ALA | A | 163 | 0 | -5.967  | 29.223 | 19.965 | 1.00 | 30.49 |
| ATOM | 1257 | CB  | ALA | A | 163 | 0 | -5.607  | 32.217 | 18.911 | 1.00 | 30.29 |
| ATOM | 1258 | N   | GLN | A | 164 | 0 | -6.101  | 29.130 | 17.754 | 1.00 | 28.69 |
| ATOM | 1259 | CA  | GLN | A | 164 | 0 | -5.616  | 27.769 | 17.612 | 1.00 | 28.24 |
| ATOM | 1260 | C   | GLN | A | 164 | 0 | -4.720  | 27.744 | 16.370 | 1.00 | 25.02 |
| ATOM | 1261 | O   | GLN | A | 164 | 0 | -5.157  | 28.046 | 15.260 | 1.00 | 23.64 |
| ATOM | 1262 | CB  | GLN | A | 164 | 0 | -6.732  | 26.756 | 17.361 | 1.00 | 31.99 |
| ATOM | 1263 | CG  | GLN | A | 164 | 0 | -7.885  | 26.640 | 18.319 | 1.00 | 36.24 |
| ATOM | 1264 | CD  | GLN | A | 164 | 0 | -7.535  | 25.809 | 19.540 | 1.00 | 40.95 |
| ATOM | 1265 | OE1 | GLN | A | 164 | 0 | -7.863  | 26.166 | 20.684 | 1.00 | 43.34 |
| ATOM | 1266 | NE2 | GLN | A | 164 | 0 | -6.864  | 24.672 | 19.328 | 1.00 | 41.86 |
| ATOM | 1267 | N   | PRO | A | 165 | 0 | -3.446  | 27.406 | 16.549 | 1.00 | 22.68 |
| ATOM | 1268 | CA  | PRO | A | 165 | 0 | -2.501  | 27.360 | 15.463 | 1.00 | 20.43 |
| ATOM | 1269 | C   | PRO | A | 165 | 0 | -2.856  | 26.294 | 14.429 | 1.00 | 18.89 |
| ATOM | 1270 | O   | PRO | A | 165 | 0 | -3.286  | 25.176 | 14.715 | 1.00 | 18.00 |
| ATOM | 1271 | CB  | PRO | A | 165 | 0 | -1.126  | 27.075 | 16.088 | 1.00 | 20.83 |
| ATOM | 1272 | CG  | PRO | A | 165 | 0 | -1.476  | 26.651 | 17.479 | 1.00 | 22.05 |
| ATOM | 1273 | CD  | PRO | A | 165 | 0 | -2.873  | 27.081 | 17.851 | 1.00 | 21.57 |
| ATOM | 1274 | N   | ASP | A | 166 | 0 | -2.667  | 26.608 | 13.169 | 1.00 | 17.50 |
| ATOM | 1275 | CA  | ASP | A | 166 | 0 | -2.829  | 25.677 | 12.059 | 1.00 | 19.82 |
| ATOM | 1276 | C   | ASP | A | 166 | 0 | -1.591  | 24.788 | 11.930 | 1.00 | 19.47 |
| ATOM | 1277 | O   | ASP | A | 166 | 0 | -1.692  | 23.649 | 11.506 | 1.00 | 19.38 |
| ATOM | 1278 | CB  | ASP | A | 166 | 0 | -3.005  | 26.413 | 10.727 | 1.00 | 19.75 |
| ATOM | 1279 | CG  | ASP | A | 166 | 0 | -4.347  | 27.162 | 10.728 | 1.00 | 21.69 |
| ATOM | 1280 | OD1 | ASP | A | 166 | 0 | -5.376  | 26.480 | 10.593 | 1.00 | 22.24 |
| ATOM | 1281 | OD2 | ASP | A | 166 | 0 | -4.384  | 28.392 | 10.885 | 1.00 | 22.13 |
| ATOM | 1282 | N   | ALA | A | 167 | 0 | -0.435  | 25.386 | 12.231 | 1.00 | 18.54 |
| ATOM | 1283 | CA  | ALA | A | 167 | 0 | 0.806   | 24.614 | 12.142 | 1.00 | 18.74 |
| ATOM | 1284 | C   | ALA | A | 167 | 0 | 1.867   | 25.056 | 13.148 | 1.00 | 17.66 |

|     |      |      |     |     |   |     |   |        |        |        |      |       |
|-----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|     | ATOM | 1285 | O   | ALA | A | 167 | 0 | 1.874  | 26.147 | 13.715 | 1.00 | 15.83 |
|     | ATOM | 1286 | CB  | ALA | A | 167 | 0 | 1.387  | 24.767 | 10.735 | 1.00 | 17.32 |
|     | ATOM | 1287 | N   | THR | A | 168 | 0 | 2.826  | 24.166 | 13.335 | 1.00 | 18.40 |
|     | ATOM | 1288 | CA  | THR | A | 168 | 0 | 4.087  | 24.402 | 14.027 | 1.00 | 14.85 |
| 5   | ATOM | 1289 | C   | THR | A | 168 | 0 | 5.180  | 24.553 | 12.955 | 1.00 | 15.24 |
|     | ATOM | 1290 | O   | THR | A | 168 | 0 | 5.402  | 23.737 | 12.071 | 1.00 | 12.99 |
|     | ATOM | 1291 | CB  | THR | A | 168 | 0 | 4.530  | 23.235 | 14.900 | 1.00 | 14.31 |
|     | ATOM | 1292 | OG1 | THR | A | 168 | 0 | 3.558  | 23.068 | 15.920 | 1.00 | 12.30 |
|     | ATOM | 1293 | CG2 | THR | A | 168 | 0 | 5.921  | 23.516 | 15.524 | 1.00 | 13.60 |
| 10  | ATOM | 1294 | N   | LEU | A | 169 | 0 | 5.867  | 25.686 | 12.973 | 1.00 | 16.69 |
|     | ATOM | 1295 | CA  | LEU | A | 169 | 0 | 6.976  | 26.002 | 12.071 | 1.00 | 14.74 |
|     | ATOM | 1296 | C   | LEU | A | 169 | 0 | 8.285  | 25.747 | 12.833 | 1.00 | 14.34 |
|     | ATOM | 1297 | O   | LEU | A | 169 | 0 | 8.497  | 26.259 | 13.942 | 1.00 | 12.34 |
|     | ATOM | 1298 | CB  | LEU | A | 169 | 0 | 6.890  | 27.471 | 11.652 | 1.00 | 14.90 |
| 15  | ATOM | 1299 | CG  | LEU | A | 169 | 0 | 6.071  | 27.845 | 10.428 | 1.00 | 17.83 |
| 20  | ATOM | 1300 | CD1 | LEU | A | 169 | 0 | 4.978  | 26.825 | 10.133 | 1.00 | 15.89 |
| 25  | ATOM | 1301 | CD2 | LEU | A | 169 | 0 | 5.500  | 29.254 | 10.443 | 1.00 | 16.43 |
| 30  | ATOM | 1302 | N   | ILE | A | 170 | 0 | 9.141  | 24.923 | 12.255 | 1.00 | 14.06 |
| 35  | ATOM | 1303 | CA  | ILE | A | 170 | 0 | 10.472 | 24.659 | 12.819 | 1.00 | 14.01 |
| 40  | ATOM | 1304 | C   | ILE | A | 170 | 0 | 11.397 | 25.312 | 11.784 | 1.00 | 15.19 |
| 45  | ATOM | 1305 | O   | ILE | A | 170 | 0 | 11.307 | 25.009 | 10.585 | 1.00 | 14.73 |
| 50  | ATOM | 1306 | CB  | ILE | A | 170 | 0 | 10.807 | 23.179 | 13.025 | 1.00 | 14.75 |
| 55  | ATOM | 1307 | CG1 | ILE | A | 170 | 0 | 9.849  | 22.605 | 14.069 | 1.00 | 13.74 |
| 60  | ATOM | 1308 | CG2 | ILE | A | 170 | 0 | 12.268 | 22.983 | 13.468 | 1.00 | 13.47 |
| 65  | ATOM | 1309 | CD1 | ILE | A | 170 | 0 | 9.915  | 21.134 | 14.385 | 1.00 | 15.26 |
| 70  | ATOM | 1310 | N   | ASN | A | 171 | 0 | 12.166 | 26.317 | 12.208 | 1.00 | 13.13 |
| 75  | ATOM | 1311 | CA  | ASN | A | 171 | 0 | 12.992 | 27.042 | 11.250 | 1.00 | 13.74 |
| 80  | ATOM | 1312 | C   | ASN | A | 171 | 0 | 12.163 | 27.517 | 10.083 | 1.00 | 13.71 |
| 85  | ATOM | 1313 | O   | ASN | A | 171 | 0 | 12.562 | 27.381 | 8.921  | 1.00 | 13.20 |
| 90  | ATOM | 1314 | CB  | ASN | A | 171 | 0 | 14.220 | 26.209 | 10.793 | 1.00 | 14.42 |
| 95  | ATOM | 1315 | CG  | ASN | A | 171 | 0 | 15.236 | 26.157 | 11.940 | 1.00 | 16.29 |
| 100 | ATOM | 1316 | OD1 | ASN | A | 171 | 0 | 15.123 | 26.983 | 12.875 | 1.00 | 16.78 |
| 105 | ATOM | 1317 | ND2 | ASN | A | 171 | 0 | 16.203 | 25.259 | 11.964 | 1.00 | 14.32 |
| 110 | ATOM | 1318 | N   | GLY | A | 172 | 0 | 10.967 | 28.074 | 10.337 | 1.00 | 14.17 |
| 115 | ATOM | 1319 | CA  | GLY | A | 172 | 0 | 10.157 | 28.619 | 9.270  | 1.00 | 11.74 |
| 120 | ATOM | 1320 | C   | GLY | A | 172 | 0 | 9.387  | 27.636 | 8.433  | 1.00 | 14.40 |
| 125 | ATOM | 1321 | O   | GLY | A | 172 | 0 | 8.783  | 28.064 | 7.441  | 1.00 | 15.60 |
| 130 | ATOM | 1322 | N   | LYS | A | 173 | 0 | 9.430  | 26.319 | 8.669  | 1.00 | 13.84 |

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|    |      |      |     |     |   |     |   |        |        |       |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|-------|------|-------|
|    | ATOM | 1323 | CA  | LYS | A | 173 | 0 | 8.777  | 25.363 | 7.794 | 1.00 | 13.67 |
|    | ATOM | 1324 | C   | LYS | A | 173 | 0 | 8.038  | 24.303 | 8.589 | 1.00 | 13.59 |
|    | ATOM | 1325 | O   | LYS | A | 173 | 0 | 8.445  | 24.027 | 9.723 | 1.00 | 11.70 |
|    | ATOM | 1326 | CB  | LYS | A | 173 | 0 | 9.775  | 24.645 | 6.875 | 1.00 | 17.03 |
| 5  | ATOM | 1327 | CG  | LYS | A | 173 | 0 | 10.704 | 25.577 | 6.118 | 1.00 | 17.63 |
|    | ATOM | 1328 | CD  | LYS | A | 173 | 0 | 11.508 | 24.796 | 5.094 | 1.00 | 20.84 |
|    | ATOM | 1329 | CE  | LYS | A | 173 | 0 | 12.213 | 25.821 | 4.198 | 1.00 | 22.63 |
|    | ATOM | 1330 | NZ  | LYS | A | 173 | 0 | 13.304 | 25.087 | 3.499 | 1.00 | 28.08 |
|    | ATOM | 1331 | N   | GLY | A | 174 | 0 | 6.922  | 23.821 | 8.014 | 1.00 | 12.28 |
| 10 | ATOM | 1332 | CA  | GLY | A | 174 | 0 | 6.178  | 22.768 | 8.753 | 1.00 | 11.45 |
|    | ATOM | 1333 | C   | GLY | A | 174 | 0 | 4.958  | 22.409 | 7.896 | 1.00 | 13.55 |
|    | ATOM | 1334 | O   | GLY | A | 174 | 0 | 4.823  | 22.877 | 6.760 | 1.00 | 13.37 |
|    | ATOM | 1335 | N   | ARG | A | 175 | 0 | 4.042  | 21.619 | 8.432 | 1.00 | 14.54 |
|    | ATOM | 1336 | CA  | ARG | A | 175 | 0 | 2.859  | 21.201 | 7.687 | 1.00 | 16.62 |
| 15 | ATOM | 1337 | C   | ARG | A | 175 | 0 | 1.598  | 21.336 | 8.541 | 1.00 | 17.67 |
| 20 | ATOM | 1338 | O   | ARG | A | 175 | 0 | 1.727  | 21.264 | 9.769 | 1.00 | 18.41 |
|    | ATOM | 1339 | CB  | ARG | A | 175 | 0 | 2.985  | 19.718 | 7.292 | 1.00 | 16.05 |
|    | ATOM | 1340 | CG  | ARG | A | 175 | 0 | 3.894  | 19.472 | 6.116 | 1.00 | 16.55 |
|    | ATOM | 1341 | CD  | ARG | A | 175 | 0 | 4.358  | 18.009 | 6.108 | 1.00 | 17.70 |
|    | ATOM | 1342 | NE  | ARG | A | 175 | 0 | 5.421  | 17.861 | 5.097 | 1.00 | 17.74 |
|    | ATOM | 1343 | CZ  | ARG | A | 175 | 0 | 5.971  | 16.667 | 4.792 | 1.00 | 17.63 |
|    | ATOM | 1344 | NH1 | ARG | A | 175 | 0 | 6.918  | 16.665 | 3.866 | 1.00 | 17.25 |
|    | ATOM | 1345 | NH2 | ARG | A | 175 | 0 | 5.594  | 15.538 | 5.375 | 1.00 | 14.80 |
|    | ATOM | 1346 | N   | TYR | A | 176 | 0 | 0.429  | 21.438 | 7.908 | 1.00 | 18.08 |
| 25 | ATOM | 1347 | CA  | TYR | A | 176 | 0 | -0.800 | 21.481 | 8.746 | 1.00 | 18.67 |
|    | ATOM | 1348 | C   | TYR | A | 176 | 0 | -1.613 | 20.200 | 8.509 | 1.00 | 18.24 |
|    | ATOM | 1349 | O   | TYR | A | 176 | 0 | -1.417 | 19.534 | 7.483 | 1.00 | 17.67 |
|    | ATOM | 1350 | CB  | TYR | A | 176 | 0 | -1.635 | 22.709 | 8.462 | 1.00 | 17.21 |
|    | ATOM | 1351 | CG  | TYR | A | 176 | 0 | -2.102 | 22.931 | 7.053 | 1.00 | 16.36 |
| 30 | ATOM | 1352 | CD1 | TYR | A | 176 | 0 | -1.246 | 23.433 | 6.089 | 1.00 | 14.84 |
|    | ATOM | 1353 | CD2 | TYR | A | 176 | 0 | -3.441 | 22.676 | 6.677 | 1.00 | 17.26 |
|    | ATOM | 1354 | CE1 | TYR | A | 176 | 0 | -1.640 | 23.686 | 4.796 | 1.00 | 16.01 |
|    | ATOM | 1355 | CE2 | TYR | A | 176 | 0 | -3.862 | 22.908 | 5.361 | 1.00 | 16.65 |
|    | ATOM | 1356 | CZ  | TYR | A | 176 | 0 | -2.967 | 23.407 | 4.432 | 1.00 | 17.65 |
| 35 | ATOM | 1357 | OH  | TYR | A | 176 | 0 | -3.347 | 23.678 | 3.131 | 1.00 | 17.81 |
|    | ATOM | 1358 | N   | VAL | A | 177 | 0 | -2.427 | 19.815 | 9.464 | 1.00 | 18.46 |
|    | ATOM | 1359 | CA  | VAL | A | 177 | 0 | -3.200 | 18.571 | 9.303 | 1.00 | 21.18 |
|    | ATOM | 1360 | C   | VAL | A | 177 | 0 | -4.090 | 18.639 | 8.073 | 1.00 | 21.50 |



|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 1399 | N   | LEU | A | 184 | 0 | 10.010 | 20.093 | 4.691  | 1.00 | 17.33 |
|    | ATOM | 1400 | CA  | LEU | A | 184 | 0 | 10.388 | 20.155 | 6.098  | 1.00 | 18.77 |
|    | ATOM | 1401 | C   | LEU | A | 184 | 0 | 11.780 | 20.743 | 6.255  | 1.00 | 19.44 |
|    | ATOM | 1402 | O   | LEU | A | 184 | 0 | 12.582 | 20.687 | 5.314  | 1.00 | 20.95 |
| 5  | ATOM | 1403 | CB  | LEU | A | 184 | 0 | 10.331 | 18.735 | 6.673  | 1.00 | 18.11 |
|    | ATOM | 1404 | CG  | LEU | A | 184 | 0 | 8.915  | 18.125 | 6.577  | 1.00 | 19.10 |
|    | ATOM | 1405 | CD1 | LEU | A | 184 | 0 | 8.887  | 16.734 | 7.178  | 1.00 | 18.87 |
|    | ATOM | 1406 | CD2 | LEU | A | 184 | 0 | 7.868  | 19.026 | 7.229  | 1.00 | 18.69 |
|    | ATOM | 1407 | N   | SER | A | 185 | 0 | 12.054 | 21.342 | 7.398  | 1.00 | 18.46 |
| 10 | ATOM | 1408 | CA  | SER | A | 185 | 0 | 13.366 | 21.883 | 7.699  | 1.00 | 17.73 |
|    | ATOM | 1409 | C   | SER | A | 185 | 0 | 14.298 | 20.699 | 8.018  | 1.00 | 16.95 |
|    | ATOM | 1410 | O   | SER | A | 185 | 0 | 13.883 | 19.710 | 8.629  | 1.00 | 15.84 |
|    | ATOM | 1411 | CB  | SER | A | 185 | 0 | 13.303 | 22.786 | 8.934  | 1.00 | 17.34 |
|    | ATOM | 1412 | OG  | SER | A | 185 | 0 | 12.846 | 24.073 | 8.560  | 1.00 | 18.09 |
| 15 | ATOM | 1413 | N   | ILE | A | 186 | 0 | 15.533 | 20.845 | 7.587  | 1.00 | 16.43 |
|    | ATOM | 1414 | CA  | ILE | A | 186 | 0 | 16.595 | 19.858 | 7.821  | 1.00 | 16.85 |
|    | ATOM | 1415 | C   | ILE | A | 186 | 0 | 17.725 | 20.491 | 8.626  | 1.00 | 15.86 |
|    | ATOM | 1416 | O   | ILE | A | 186 | 0 | 18.178 | 21.605 | 8.387  | 1.00 | 11.67 |
|    | ATOM | 1417 | CB  | ILE | A | 186 | 0 | 17.193 | 19.390 | 6.471  | 1.00 | 18.77 |
| 20 | ATOM | 1418 | CG1 | ILE | A | 186 | 0 | 16.048 | 18.895 | 5.557  | 1.00 | 19.78 |
|    | ATOM | 1419 | CG2 | ILE | A | 186 | 0 | 18.167 | 18.241 | 6.697  | 1.00 | 18.53 |
|    | ATOM | 1420 | CD1 | ILE | A | 186 | 0 | 16.464 | 18.731 | 4.110  | 1.00 | 22.35 |
|    | ATOM | 1421 | N   | VAL | A | 187 | 0 | 18.114 | 19.840 | 9.703  | 1.00 | 16.18 |
|    | ATOM | 1422 | CA  | VAL | A | 187 | 0 | 19.243 | 20.287 | 10.505 | 1.00 | 16.63 |
|    | ATOM | 1423 | C   | VAL | A | 187 | 0 | 20.362 | 19.239 | 10.231 | 1.00 | 17.36 |
|    | ATOM | 1424 | O   | VAL | A | 187 | 0 | 20.158 | 18.046 | 10.505 | 1.00 | 15.19 |
|    | ATOM | 1425 | CB  | VAL | A | 187 | 0 | 18.928 | 20.323 | 11.984 | 1.00 | 16.68 |
|    | ATOM | 1426 | CG1 | VAL | A | 187 | 0 | 20.198 | 20.622 | 12.796 | 1.00 | 16.82 |
|    | ATOM | 1427 | CG2 | VAL | A | 187 | 0 | 17.874 | 21.375 | 12.275 | 1.00 | 17.07 |
| 30 | ATOM | 1428 | N   | ASN | A | 188 | 0 | 21.449 | 19.695 | 9.634  | 1.00 | 16.45 |
|    | ATOM | 1429 | CA  | ASN | A | 188 | 0 | 22.528 | 18.766 | 9.272  | 1.00 | 19.84 |
|    | ATOM | 1430 | C   | ASN | A | 188 | 0 | 23.598 | 18.597 | 10.349 | 1.00 | 19.41 |
|    | ATOM | 1431 | O   | ASN | A | 188 | 0 | 24.051 | 19.618 | 10.862 | 1.00 | 21.31 |
|    | ATOM | 1432 | CB  | ASN | A | 188 | 0 | 23.209 | 19.246 | 7.976  | 1.00 | 18.78 |
| 35 | ATOM | 1433 | CG  | ASN | A | 188 | 0 | 22.249 | 19.186 | 6.797  | 1.00 | 20.77 |
|    | ATOM | 1434 | OD1 | ASN | A | 188 | 0 | 21.734 | 20.201 | 6.305  | 1.00 | 21.70 |
|    | ATOM | 1435 | ND2 | ASN | A | 188 | 0 | 21.995 | 17.985 | 6.286  | 1.00 | 20.52 |
|    | ATOM | 1436 | N   | VAL | A | 189 | 0 | 24.024 | 17.389 | 10.681 | 1.00 | 17.35 |

|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 1437 | CA  | VAL | A | 189 | 0 | 25.098 | 17.164 | 11.617 | 1.00 | 17.93 |
|    | ATOM | 1438 | C   | VAL | A | 189 | 0 | 26.091 | 16.135 | 11.046 | 1.00 | 19.82 |
|    | ATOM | 1439 | O   | VAL | A | 189 | 0 | 25.773 | 15.392 | 10.109 | 1.00 | 18.90 |
|    | ATOM | 1440 | CB  | VAL | A | 189 | 0 | 24.660 | 16.684 | 13.009 | 1.00 | 18.43 |
| 5  | ATOM | 1441 | CG1 | VAL | A | 189 | 0 | 23.931 | 17.796 | 13.766 | 1.00 | 18.89 |
|    | ATOM | 1442 | CG2 | VAL | A | 189 | 0 | 23.760 | 15.449 | 12.965 | 1.00 | 15.94 |
|    | ATOM | 1443 | N   | GLU | A | 190 | 0 | 27.242 | 15.993 | 11.688 | 1.00 | 21.48 |
|    | ATOM | 1444 | CA  | GLU | A | 190 | 0 | 28.220 | 14.972 | 11.274 | 1.00 | 24.63 |
|    | ATOM | 1445 | C   | GLU | A | 190 | 0 | 28.514 | 14.065 | 12.469 | 1.00 | 23.06 |
| 10 | ATOM | 1446 | O   | GLU | A | 190 | 0 | 28.797 | 14.650 | 13.522 | 1.00 | 21.04 |
|    | ATOM | 1447 | CB  | GLU | A | 190 | 0 | 29.569 | 15.551 | 10.860 | 1.00 | 26.79 |
|    | ATOM | 1448 | CG  | GLU | A | 190 | 0 | 29.571 | 16.355 | 9.567  | 1.00 | 32.24 |
|    | ATOM | 1449 | CD  | GLU | A | 190 | 0 | 30.951 | 16.990 | 9.351  | 1.00 | 34.67 |
|    | ATOM | 1450 | OE1 | GLU | A | 190 | 0 | 31.927 | 16.199 | 9.305  | 1.00 | 35.41 |
| 15 | ATOM | 1451 | OE2 | GLU | A | 190 | 0 | 30.999 | 18.236 | 9.264  | 1.00 | 35.78 |
|    | ATOM | 1452 | N   | GLN | A | 191 | 0 | 28.490 | 12.752 | 12.256 | 1.00 | 21.94 |
|    | ATOM | 1453 | CA  | GLN | A | 191 | 0 | 28.768 | 11.824 | 13.357 | 1.00 | 21.92 |
|    | ATOM | 1454 | C   | GLN | A | 191 | 0 | 30.121 | 12.151 | 13.984 | 1.00 | 22.68 |
|    | ATOM | 1455 | O   | GLN | A | 191 | 0 | 31.052 | 12.516 | 13.251 | 1.00 | 23.08 |
| 20 | ATOM | 1456 | CB  | GLN | A | 191 | 0 | 28.797 | 10.400 | 12.820 | 1.00 | 22.01 |
|    | ATOM | 1457 | CG  | GLN | A | 191 | 0 | 28.795 | 9.347  | 13.917 | 1.00 | 23.87 |
|    | ATOM | 1458 | CD  | GLN | A | 191 | 0 | 28.846 | 7.966  | 13.259 | 1.00 | 26.64 |
|    | ATOM | 1459 | OE1 | GLN | A | 191 | 0 | 29.745 | 7.761  | 12.427 | 1.00 | 28.86 |
|    | ATOM | 1460 | NE2 | GLN | A | 191 | 0 | 27.909 | 7.080  | 13.563 | 1.00 | 26.40 |
| 25 | ATOM | 1461 | N   | GLY | A | 192 | 0 | 30.224 | 12.119 | 15.290 | 1.00 | 21.84 |
|    | ATOM | 1462 | CA  | GLY | A | 192 | 0 | 31.418 | 12.469 | 15.996 | 1.00 | 22.91 |
|    | ATOM | 1463 | C   | GLY | A | 192 | 0 | 31.564 | 13.910 | 16.446 | 1.00 | 23.87 |
|    | ATOM | 1464 | O   | GLY | A | 192 | 0 | 32.394 | 14.174 | 17.322 | 1.00 | 25.80 |
|    | ATOM | 1465 | N   | LYS | A | 193 | 0 | 30.839 | 14.867 | 15.922 | 1.00 | 23.54 |
| 30 | ATOM | 1466 | CA  | LYS | A | 193 | 0 | 30.899 | 16.259 | 16.362 | 1.00 | 22.84 |
|    | ATOM | 1467 | C   | LYS | A | 193 | 0 | 29.840 | 16.584 | 17.404 | 1.00 | 21.67 |
|    | ATOM | 1468 | O   | LYS | A | 193 | 0 | 28.826 | 15.882 | 17.538 | 1.00 | 20.99 |
|    | ATOM | 1469 | CB  | LYS | A | 193 | 0 | 30.682 | 17.155 | 15.143 | 1.00 | 24.53 |
|    | ATOM | 1470 | CG  | LYS | A | 193 | 0 | 31.900 | 17.149 | 14.217 | 1.00 | 27.82 |
| 35 | ATOM | 1471 | CD  | LYS | A | 193 | 0 | 31.739 | 18.261 | 13.199 | 1.00 | 30.02 |
|    | ATOM | 1472 | CE  | LYS | A | 193 | 0 | 33.060 | 19.001 | 12.990 | 1.00 | 31.93 |
|    | ATOM | 1473 | NZ  | LYS | A | 193 | 0 | 33.392 | 18.906 | 11.540 | 1.00 | 33.14 |
|    | ATOM | 1474 | N   | LYS | A | 194 | 0 | 30.067 | 17.626 | 18.169 | 1.00 | 19.25 |



|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 1475 | CA  | LYS | A | 194 | 0 | 29.168 | 18.115 | 19.187 | 1.00 | 19.49 |
|    | ATOM | 1476 | C   | LYS | A | 194 | 0 | 28.722 | 19.523 | 18.780 | 1.00 | 19.40 |
|    | ATOM | 1477 | O   | LYS | A | 194 | 0 | 29.512 | 20.285 | 18.235 | 1.00 | 19.29 |
|    | ATOM | 1478 | CB  | LYS | A | 194 | 0 | 29.771 | 18.115 | 20.576 | 1.00 | 21.88 |
| 5  | ATOM | 1479 | CG  | LYS | A | 194 | 0 | 30.338 | 16.748 | 20.999 | 1.00 | 25.59 |
|    | ATOM | 1480 | CD  | LYS | A | 194 | 0 | 31.054 | 16.902 | 22.331 | 1.00 | 29.48 |
|    | ATOM | 1481 | CE  | LYS | A | 194 | 0 | 31.455 | 15.582 | 22.970 | 1.00 | 33.58 |
|    | ATOM | 1482 | NZ  | LYS | A | 194 | 0 | 30.363 | 15.049 | 23.868 | 1.00 | 35.93 |
|    | ATOM | 1483 | N   | TYR | A | 195 | 0 | 27.418 | 19.818 | 18.910 | 1.00 | 16.92 |
| 10 | ATOM | 1484 | CA  | TYR | A | 195 | 0 | 26.858 | 21.068 | 18.431 | 1.00 | 15.60 |
|    | ATOM | 1485 | C   | TYR | A | 195 | 0 | 26.143 | 21.838 | 19.530 | 1.00 | 14.20 |
|    | ATOM | 1486 | O   | TYR | A | 195 | 0 | 25.394 | 21.232 | 20.295 | 1.00 | 13.75 |
|    | ATOM | 1487 | CB  | TYR | A | 195 | 0 | 25.814 | 20.880 | 17.300 | 1.00 | 16.13 |
|    | ATOM | 1488 | CG  | TYR | A | 195 | 0 | 26.424 | 20.225 | 16.066 | 1.00 | 15.41 |
| 15 | ATOM | 1489 | CD1 | TYR | A | 195 | 0 | 26.663 | 18.851 | 16.091 | 1.00 | 15.91 |
| 16 | ATOM | 1490 | CD2 | TYR | A | 195 | 0 | 26.786 | 20.942 | 14.945 | 1.00 | 14.73 |
| 17 | ATOM | 1491 | CE1 | TYR | A | 195 | 0 | 27.244 | 18.204 | 15.010 | 1.00 | 16.55 |
| 18 | ATOM | 1492 | CE2 | TYR | A | 195 | 0 | 27.331 | 20.312 | 13.839 | 1.00 | 15.60 |
| 19 | ATOM | 1493 | CZ  | TYR | A | 195 | 0 | 27.570 | 18.947 | 13.888 | 1.00 | 16.18 |
| 20 | ATOM | 1494 | OH  | TYR | A | 195 | 0 | 28.144 | 18.287 | 12.831 | 1.00 | 15.64 |
| 21 | ATOM | 1495 | N   | ARG | A | 196 | 0 | 26.366 | 23.136 | 19.561 | 1.00 | 12.74 |
| 22 | ATOM | 1496 | CA  | ARG | A | 196 | 0 | 25.619 | 23.980 | 20.482 | 1.00 | 13.63 |
| 23 | ATOM | 1497 | C   | ARG | A | 196 | 0 | 24.343 | 24.369 | 19.711 | 1.00 | 13.86 |
| 24 | ATOM | 1498 | O   | ARG | A | 196 | 0 | 24.343 | 25.218 | 18.802 | 1.00 | 13.81 |
| 25 | ATOM | 1499 | CB  | ARG | A | 196 | 0 | 26.379 | 25.187 | 20.991 | 1.00 | 13.96 |
| 26 | ATOM | 1500 | CG  | ARG | A | 196 | 0 | 25.520 | 26.162 | 21.796 | 1.00 | 14.22 |
| 27 | ATOM | 1501 | CD  | ARG | A | 196 | 0 | 26.337 | 27.238 | 22.438 | 1.00 | 15.27 |
| 28 | ATOM | 1502 | NE  | ARG | A | 196 | 0 | 25.649 | 28.138 | 23.319 | 1.00 | 17.38 |
| 29 | ATOM | 1503 | CZ  | ARG | A | 196 | 0 | 26.203 | 29.034 | 24.140 | 1.00 | 18.86 |
| 30 | ATOM | 1504 | NH1 | ARG | A | 196 | 0 | 27.540 | 29.141 | 24.217 | 1.00 | 16.30 |
| 31 | ATOM | 1505 | NH2 | ARG | A | 196 | 0 | 25.377 | 29.788 | 24.869 | 1.00 | 16.73 |
| 32 | ATOM | 1506 | N   | MET | A | 197 | 0 | 23.266 | 23.624 | 20.002 | 1.00 | 13.86 |
| 33 | ATOM | 1507 | CA  | MET | A | 197 | 0 | 21.980 | 23.932 | 19.340 | 1.00 | 12.98 |
| 34 | ATOM | 1508 | C   | MET | A | 197 | 0 | 21.293 | 25.055 | 20.127 | 1.00 | 12.50 |
| 35 | ATOM | 1509 | O   | MET | A | 197 | 0 | 21.285 | 24.997 | 21.359 | 1.00 | 13.93 |
| 36 | ATOM | 1510 | CB  | MET | A | 197 | 0 | 21.118 | 22.693 | 19.266 | 1.00 | 12.50 |
| 37 | ATOM | 1511 | CG  | MET | A | 197 | 0 | 21.762 | 21.567 | 18.447 | 1.00 | 13.94 |
| 38 | ATOM | 1512 | SD  | MET | A | 197 | 0 | 21.860 | 22.033 | 16.735 | 1.00 | 16.62 |



|    |      |      |     |           |   |        |        |        |      |       |
|----|------|------|-----|-----------|---|--------|--------|--------|------|-------|
|    | ATOM | 1551 | CB  | LEU A 202 | 0 | 9.239  | 32.618 | 17.379 | 1.00 | 9.09  |
|    | ATOM | 1552 | CG  | LEU A 202 | 0 | 10.691 | 32.451 | 16.888 | 1.00 | 10.90 |
|    | ATOM | 1553 | CD1 | LEU A 202 | 0 | 10.637 | 32.470 | 15.367 | 1.00 | 10.05 |
|    | ATOM | 1554 | CD2 | LEU A 202 | 0 | 11.617 | 33.559 | 17.414 | 1.00 | 8.56  |
| 5  | ATOM | 1555 | N   | SER A 203 | 0 | 6.821  | 31.942 | 19.892 | 1.00 | 9.59  |
|    | ATOM | 1556 | CA  | SER A 203 | 0 | 5.414  | 31.756 | 20.017 | 1.00 | 15.31 |
|    | ATOM | 1557 | C   | SER A 203 | 0 | 4.624  | 32.960 | 20.544 | 1.00 | 16.67 |
|    | ATOM | 1558 | O   | SER A 203 | 0 | 4.964  | 33.676 | 21.483 | 1.00 | 16.42 |
|    | ATOM | 1559 | CB  | SER A 203 | 0 | 5.130  | 30.505 | 20.867 | 1.00 | 15.21 |
| 10 | ATOM | 1560 | OG  | SER A 203 | 0 | 3.742  | 30.240 | 21.004 | 1.00 | 17.14 |
|    | ATOM | 1561 | N   | CYS A 204 | 0 | 3.428  | 33.051 | 19.984 | 1.00 | 17.18 |
|    | ATOM | 1562 | CA  | CYS A 204 | 0 | 2.442  | 34.018 | 20.470 | 1.00 | 18.43 |
|    | ATOM | 1563 | C   | CYS A 204 | 0 | 1.599  | 33.316 | 21.522 | 1.00 | 17.02 |
|    | ATOM | 1564 | O   | CYS A 204 | 0 | 0.867  | 34.039 | 22.200 | 1.00 | 17.27 |
| 15 | ATOM | 1565 | CB  | CYS A 204 | 0 | 1.524  | 34.508 | 19.334 | 1.00 | 18.60 |
|    | ATOM | 1566 | SG  | CYS A 204 | 0 | 2.135  | 36.038 | 18.612 | 1.00 | 20.23 |
|    | ATOM | 1567 | N   | ASP A 205 | 0 | 1.687  | 31.989 | 21.665 | 1.00 | 16.38 |
|    | ATOM | 1568 | CA  | ASP A 205 | 0 | 0.776  | 31.392 | 22.683 | 1.00 | 12.26 |
|    | ATOM | 1569 | C   | ASP A 205 | 0 | 1.123  | 30.002 | 23.087 | 1.00 | 11.34 |
| 20 | ATOM | 1570 | O   | ASP A 205 | 0 | 1.432  | 29.687 | 24.255 | 1.00 | 11.40 |
|    | ATOM | 1571 | CB  | ASP A 205 | 0 | -0.622 | 31.516 | 22.076 | 1.00 | 14.87 |
|    | ATOM | 1572 | CG  | ASP A 205 | 0 | -1.729 | 30.881 | 22.892 | 1.00 | 16.61 |
|    | ATOM | 1573 | OD1 | ASP A 205 | 0 | -2.884 | 30.999 | 22.433 | 1.00 | 18.48 |
|    | ATOM | 1574 | OD2 | ASP A 205 | 0 | -1.534 | 30.263 | 23.966 | 1.00 | 17.48 |
| 25 | ATOM | 1575 | N   | PRO A 206 | 0 | 1.036  | 29.030 | 22.205 | 1.00 | 11.79 |
|    | ATOM | 1576 | CA  | PRO A 206 | 0 | 1.313  | 27.639 | 22.542 | 1.00 | 11.91 |
|    | ATOM | 1577 | C   | PRO A 206 | 0 | 2.739  | 27.411 | 23.045 | 1.00 | 14.01 |
|    | ATOM | 1578 | O   | PRO A 206 | 0 | 3.676  | 28.135 | 22.661 | 1.00 | 14.38 |
|    | ATOM | 1579 | CB  | PRO A 206 | 0 | 1.124  | 26.816 | 21.262 | 1.00 | 11.87 |
| 30 | ATOM | 1580 | CG  | PRO A 206 | 0 | 1.112  | 27.893 | 20.191 | 1.00 | 12.83 |
|    | ATOM | 1581 | CD  | PRO A 206 | 0 | 0.749  | 29.241 | 20.766 | 1.00 | 11.09 |
|    | ATOM | 1582 | N   | ASN A 207 | 0 | 2.888  | 26.439 | 23.911 | 1.00 | 13.06 |
|    | ATOM | 1583 | CA  | ASN A 207 | 0 | 4.128  | 25.919 | 24.429 | 1.00 | 15.01 |
|    | ATOM | 1584 | C   | ASN A 207 | 0 | 4.332  | 24.591 | 23.677 | 1.00 | 15.84 |
| 35 | ATOM | 1585 | O   | ASN A 207 | 0 | 3.376  | 24.095 | 23.038 | 1.00 | 16.22 |
|    | ATOM | 1586 | CB  | ASN A 207 | 0 | 4.144  | 25.682 | 25.933 | 1.00 | 15.12 |
|    | ATOM | 1587 | CG  | ASN A 207 | 0 | 3.054  | 24.708 | 26.395 | 1.00 | 19.36 |
|    | ATOM | 1588 | OD1 | ASN A 207 | 0 | 2.062  | 25.161 | 27.014 | 1.00 | 19.36 |

|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 1589 | ND2 | ASN | A | 207 | 0 | 3.174  | 23.408 | 26.203 | 1.00 | 16.49 |
|    | ATOM | 1590 | N   | TRP | A | 208 | 0 | 5.557  | 24.077 | 23.634 | 1.00 | 14.46 |
|    | ATOM | 1591 | CA  | TRP | A | 208 | 0 | 5.827  | 22.865 | 22.892 | 1.00 | 12.04 |
|    | ATOM | 1592 | C   | TRP | A | 208 | 0 | 6.638  | 21.921 | 23.783 | 1.00 | 13.85 |
| 5  | ATOM | 1593 | O   | TRP | A | 208 | 0 | 7.482  | 22.385 | 24.558 | 1.00 | 13.02 |
|    | ATOM | 1594 | CB  | TRP | A | 208 | 0 | 6.654  | 23.136 | 21.628 | 1.00 | 11.91 |
|    | ATOM | 1595 | CG  | TRP | A | 208 | 0 | 5.951  | 23.769 | 20.465 | 1.00 | 11.27 |
|    | ATOM | 1596 | CD1 | TRP | A | 208 | 0 | 5.149  | 23.164 | 19.561 | 1.00 | 10.33 |
|    | ATOM | 1597 | CD2 | TRP | A | 208 | 0 | 5.988  | 25.158 | 20.092 | 1.00 | 10.29 |
| 10 | ATOM | 1598 | NE1 | TRP | A | 208 | 0 | 4.698  | 24.078 | 18.625 | 1.00 | 10.91 |
|    | ATOM | 1599 | CE2 | TRP | A | 208 | 0 | 5.201  | 25.313 | 18.954 | 1.00 | 9.64  |
|    | ATOM | 1600 | CE3 | TRP | A | 208 | 0 | 6.634  | 26.294 | 20.625 | 1.00 | 10.25 |
|    | ATOM | 1601 | CZ2 | TRP | A | 208 | 0 | 5.011  | 26.553 | 18.344 | 1.00 | 8.53  |
|    | ATOM | 1602 | CZ3 | TRP | A | 208 | 0 | 6.494  | 27.514 | 20.019 | 1.00 | 10.02 |
| 15 | ATOM | 1603 | CH2 | TRP | A | 208 | 0 | 5.668  | 27.633 | 18.881 | 1.00 | 11.79 |
| 16 | ATOM | 1604 | N   | GLN | A | 209 | 0 | 6.420  | 20.620 | 23.580 | 1.00 | 13.82 |
| 17 | ATOM | 1605 | CA  | GLN | A | 209 | 0 | 7.240  | 19.588 | 24.192 | 1.00 | 13.83 |
| 18 | ATOM | 1606 | C   | GLN | A | 209 | 0 | 8.251  | 19.281 | 23.075 | 1.00 | 13.07 |
| 19 | ATOM | 1607 | O   | GLN | A | 209 | 0 | 7.848  | 18.968 | 21.948 | 1.00 | 14.18 |
| 20 | ATOM | 1608 | CB  | GLN | A | 209 | 0 | 6.441  | 18.319 | 24.487 | 1.00 | 15.65 |
| 21 | ATOM | 1609 | CG  | GLN | A | 209 | 0 | 5.449  | 18.481 | 25.649 | 1.00 | 17.26 |
| 22 | ATOM | 1610 | CD  | GLN | A | 209 | 0 | 6.177  | 18.514 | 26.975 | 1.00 | 18.17 |
| 23 | ATOM | 1611 | OE1 | GLN | A | 209 | 0 | 7.414  | 18.471 | 27.002 | 1.00 | 20.00 |
| 24 | ATOM | 1612 | NE2 | GLN | A | 209 | 0 | 5.462  | 18.570 | 28.085 | 1.00 | 16.89 |
| 25 | ATOM | 1613 | N   | PHE | A | 210 | 0 | 9.538  | 19.461 | 23.351 | 1.00 | 11.26 |
| 26 | ATOM | 1614 | CA  | PHE | A | 210 | 0 | 10.526 | 19.329 | 22.287 | 1.00 | 10.01 |
| 27 | ATOM | 1615 | C   | PHE | A | 210 | 0 | 11.457 | 18.153 | 22.585 | 1.00 | 9.18  |
| 28 | ATOM | 1616 | O   | PHE | A | 210 | 0 | 11.894 | 17.999 | 23.732 | 1.00 | 10.07 |
| 29 | ATOM | 1617 | CB  | PHE | A | 210 | 0 | 11.370 | 20.629 | 22.292 | 1.00 | 10.86 |
| 30 | ATOM | 1618 | CG  | PHE | A | 210 | 0 | 12.489 | 20.581 | 21.292 | 1.00 | 9.63  |
|    | ATOM | 1619 | CD1 | PHE | A | 210 | 0 | 13.760 | 20.179 | 21.674 | 1.00 | 9.95  |
|    | ATOM | 1620 | CD2 | PHE | A | 210 | 0 | 12.251 | 20.922 | 19.984 | 1.00 | 8.54  |
|    | ATOM | 1621 | CE1 | PHE | A | 210 | 0 | 14.778 | 20.150 | 20.738 | 1.00 | 9.23  |
|    | ATOM | 1622 | CE2 | PHE | A | 210 | 0 | 13.243 | 20.862 | 19.023 | 1.00 | 7.93  |
| 35 | ATOM | 1623 | CZ  | PHE | A | 210 | 0 | 14.520 | 20.491 | 19.426 | 1.00 | 8.71  |
|    | ATOM | 1624 | N   | SER | A | 211 | 0 | 11.741 | 17.384 | 21.545 | 1.00 | 8.62  |
|    | ATOM | 1625 | CA  | SER | A | 211 | 0 | 12.645 | 16.255 | 21.716 | 1.00 | 10.71 |
|    | ATOM | 1626 | C   | SER | A | 211 | 0 | 13.142 | 15.844 | 20.347 | 1.00 | 11.36 |

|    |      |      |     |           |   |        |        |        |      |       |
|----|------|------|-----|-----------|---|--------|--------|--------|------|-------|
|    | ATOM | 1627 | O   | SER A 211 | 0 | 12.661 | 16.323 | 19.315 | 1.00 | 9.99  |
|    | ATOM | 1628 | CB  | SER A 211 | 0 | 11.970 | 15.070 | 22.427 | 1.00 | 10.56 |
|    | ATOM | 1629 | OG  | SER A 211 | 0 | 10.899 | 14.731 | 21.513 | 1.00 | 12.92 |
|    | ATOM | 1630 | N   | ILE A 212 | 0 | 14.268 | 15.122 | 20.390 | 1.00 | 13.67 |
| 5  | ATOM | 1631 | CA  | ILE A 212 | 0 | 14.883 | 14.680 | 19.131 | 1.00 | 14.79 |
|    | ATOM | 1632 | C   | ILE A 212 | 0 | 15.013 | 13.166 | 19.220 | 1.00 | 15.44 |
|    | ATOM | 1633 | O   | ILE A 212 | 0 | 15.624 | 12.689 | 20.177 | 1.00 | 15.98 |
|    | ATOM | 1634 | CB  | ILE A 212 | 0 | 16.255 | 15.341 | 18.887 | 1.00 | 17.04 |
|    | ATOM | 1635 | CG1 | ILE A 212 | 0 | 16.082 | 16.859 | 18.756 | 1.00 | 15.64 |
| 10 | ATOM | 1636 | CG2 | ILE A 212 | 0 | 16.935 | 14.722 | 17.648 | 1.00 | 15.24 |
|    | ATOM | 1637 | CD1 | ILE A 212 | 0 | 17.352 | 17.648 | 18.553 | 1.00 | 16.57 |
|    | ATOM | 1638 | N   | ASP A 213 | 0 | 14.453 | 12.418 | 18.281 | 1.00 | 15.53 |
|    | ATOM | 1639 | CA  | ASP A 213 | 0 | 14.549 | 10.952 | 18.401 | 1.00 | 16.50 |
|    | ATOM | 1640 | C   | ASP A 213 | 0 | 16.004 | 10.469 | 18.541 | 1.00 | 16.69 |
| 15 | ATOM | 1641 | O   | ASP A 213 | 0 | 16.948 | 10.902 | 17.851 | 1.00 | 14.36 |
| 16 | ATOM | 1642 | CB  | ASP A 213 | 0 | 13.884 | 10.359 | 17.173 | 1.00 | 17.15 |
| 17 | ATOM | 1643 | CG  | ASP A 213 | 0 | 12.369 | 10.467 | 17.144 | 1.00 | 18.12 |
| 18 | ATOM | 1644 | OD1 | ASP A 213 | 0 | 11.751 | 10.995 | 18.092 | 1.00 | 16.90 |
| 19 | ATOM | 1645 | OD2 | ASP A 213 | 0 | 11.801 | 9.990  | 16.129 | 1.00 | 17.35 |
| 20 | ATOM | 1646 | N   | GLY A 214 | 0 | 16.198 | 9.559  | 19.477 | 1.00 | 15.76 |
| 21 | ATOM | 1647 | CA  | GLY A 214 | 0 | 17.457 | 8.900  | 19.747 | 1.00 | 17.22 |
| 22 | ATOM | 1648 | C   | GLY A 214 | 0 | 18.548 | 9.757  | 20.368 | 1.00 | 18.54 |
| 23 | ATOM | 1649 | O   | GLY A 214 | 0 | 19.680 | 9.277  | 20.404 | 1.00 | 18.20 |
| 24 | ATOM | 1650 | N   | HIS A 215 | 0 | 18.341 | 11.024 | 20.738 | 1.00 | 18.17 |
| 25 | ATOM | 1651 | CA  | HIS A 215 | 0 | 19.422 | 11.880 | 21.229 | 1.00 | 17.59 |
| 26 | ATOM | 1652 | C   | HIS A 215 | 0 | 19.096 | 12.505 | 22.577 | 1.00 | 17.92 |
| 27 | ATOM | 1653 | O   | HIS A 215 | 0 | 17.917 | 12.696 | 22.898 | 1.00 | 20.45 |
| 28 | ATOM | 1654 | CB  | HIS A 215 | 0 | 19.705 | 13.008 | 20.221 | 1.00 | 15.73 |
| 29 | ATOM | 1655 | CG  | HIS A 215 | 0 | 20.309 | 12.543 | 18.936 | 1.00 | 16.90 |
| 30 | ATOM | 1656 | ND1 | HIS A 215 | 0 | 19.589 | 11.864 | 17.963 | 1.00 | 17.35 |
| 31 | ATOM | 1657 | CD2 | HIS A 215 | 0 | 21.574 | 12.658 | 18.444 | 1.00 | 16.15 |
| 32 | ATOM | 1658 | CE1 | HIS A 215 | 0 | 20.376 | 11.576 | 16.933 | 1.00 | 17.63 |
| 33 | ATOM | 1659 | NE2 | HIS A 215 | 0 | 21.599 | 12.046 | 17.216 | 1.00 | 17.73 |
| 34 | ATOM | 1660 | N   | GLU A 216 | 0 | 20.104 | 12.815 | 23.382 | 1.00 | 17.22 |
| 35 | ATOM | 1661 | CA  | GLU A 216 | 0 | 19.876 | 13.479 | 24.665 | 1.00 | 15.86 |
| 36 | ATOM | 1662 | C   | GLU A 216 | 0 | 20.070 | 14.976 | 24.456 | 1.00 | 15.61 |
| 37 | ATOM | 1663 | O   | GLU A 216 | 0 | 20.684 | 15.386 | 23.453 | 1.00 | 14.96 |
| 38 | ATOM | 1664 | CB  | GLU A 216 | 0 | 20.817 | 12.901 | 25.694 | 1.00 | 15.38 |

|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 1665 | CG  | GLU | A | 216 | 0 | 20.440 | 11.520 | 26.166 | 1.00 | 16.53 |
|    | ATOM | 1666 | CD  | GLU | A | 216 | 0 | 21.242 | 11.058 | 27.357 | 1.00 | 17.23 |
|    | ATOM | 1667 | OE1 | GLU | A | 216 | 0 | 22.378 | 10.619 | 27.129 | 1.00 | 20.31 |
|    | ATOM | 1668 | OE2 | GLU | A | 216 | 0 | 20.813 | 11.119 | 28.519 | 1.00 | 16.06 |
| 5  | ATOM | 1669 | N   | LEU | A | 217 | 0 | 19.623 | 15.792 | 25.394 | 1.00 | 14.64 |
|    | ATOM | 1670 | CA  | LEU | A | 217 | 0 | 19.738 | 17.243 | 25.251 | 1.00 | 14.91 |
|    | ATOM | 1671 | C   | LEU | A | 217 | 0 | 20.512 | 17.792 | 26.446 | 1.00 | 14.71 |
|    | ATOM | 1672 | O   | LEU | A | 217 | 0 | 19.950 | 17.734 | 27.539 | 1.00 | 15.67 |
|    | ATOM | 1673 | CB  | LEU | A | 217 | 0 | 18.362 | 17.931 | 25.229 | 1.00 | 14.75 |
| 10 | ATOM | 1674 | CG  | LEU | A | 217 | 0 | 17.276 | 17.349 | 24.306 | 1.00 | 15.40 |
|    | ATOM | 1675 | CD1 | LEU | A | 217 | 0 | 15.939 | 18.075 | 24.505 | 1.00 | 15.08 |
|    | ATOM | 1676 | CD2 | LEU | A | 217 | 0 | 17.723 | 17.453 | 22.849 | 1.00 | 15.22 |
|    | ATOM | 1677 | N   | THR | A | 218 | 0 | 21.732 | 18.278 | 26.229 | 1.00 | 13.65 |
|    | ATOM | 1678 | CA  | THR | A | 218 | 0 | 22.507 | 18.714 | 27.402 | 1.00 | 13.26 |
| 15 | ATOM | 1679 | C   | THR | A | 218 | 0 | 22.427 | 20.232 | 27.505 | 1.00 | 13.27 |
|    | ATOM | 1680 | O   | THR | A | 218 | 0 | 23.142 | 20.955 | 26.805 | 1.00 | 12.91 |
|    | ATOM | 1681 | CB  | THR | A | 218 | 0 | 23.955 | 18.216 | 27.304 | 1.00 | 12.08 |
|    | ATOM | 1682 | OG1 | THR | A | 218 | 0 | 23.935 | 16.782 | 27.331 | 1.00 | 15.48 |
|    | ATOM | 1683 | CG2 | THR | A | 218 | 0 | 24.767 | 18.721 | 28.470 | 1.00 | 11.46 |
| 20 | ATOM | 1684 | N   | ILE | A | 219 | 0 | 21.522 | 20.649 | 28.385 | 1.00 | 13.30 |
|    | ATOM | 1685 | CA  | ILE | A | 219 | 0 | 21.259 | 22.068 | 28.547 | 1.00 | 14.53 |
|    | ATOM | 1686 | C   | ILE | A | 219 | 0 | 22.420 | 22.818 | 29.180 | 1.00 | 12.72 |
|    | ATOM | 1687 | O   | ILE | A | 219 | 0 | 22.795 | 22.492 | 30.292 | 1.00 | 13.08 |
|    | ATOM | 1688 | CB  | ILE | A | 219 | 0 | 19.930 | 22.268 | 29.323 | 1.00 | 14.74 |
| 25 | ATOM | 1689 | CG1 | ILE | A | 219 | 0 | 18.761 | 21.699 | 28.441 | 1.00 | 17.33 |
|    | ATOM | 1690 | CG2 | ILE | A | 219 | 0 | 19.666 | 23.717 | 29.656 | 1.00 | 13.40 |
|    | ATOM | 1691 | CD1 | ILE | A | 219 | 0 | 17.597 | 21.481 | 29.412 | 1.00 | 19.42 |
|    | ATOM | 1692 | N   | ILE | A | 220 | 0 | 22.898 | 23.869 | 28.510 | 1.00 | 12.55 |
|    | ATOM | 1693 | CA  | ILE | A | 220 | 0 | 23.994 | 24.696 | 29.019 | 1.00 | 13.25 |
| 30 | ATOM | 1694 | C   | ILE | A | 220 | 0 | 23.686 | 26.193 | 29.085 | 1.00 | 15.11 |
|    | ATOM | 1695 | O   | ILE | A | 220 | 0 | 24.477 | 27.001 | 29.618 | 1.00 | 14.73 |
|    | ATOM | 1696 | CB  | ILE | A | 220 | 0 | 25.239 | 24.507 | 28.125 | 1.00 | 11.80 |
|    | ATOM | 1697 | CG1 | ILE | A | 220 | 0 | 24.954 | 24.871 | 26.671 | 1.00 | 10.93 |
|    | ATOM | 1698 | CG2 | ILE | A | 220 | 0 | 25.770 | 23.072 | 28.291 | 1.00 | 9.59  |
| 35 | ATOM | 1699 | CD1 | ILE | A | 220 | 0 | 26.249 | 25.231 | 25.928 | 1.00 | 12.07 |
|    | ATOM | 1700 | N   | GLU | A | 221 | 0 | 22.490 | 26.573 | 28.597 | 1.00 | 13.30 |
|    | ATOM | 1701 | CA  | GLU | A | 221 | 0 | 22.048 | 27.951 | 28.624 | 1.00 | 12.96 |
|    | ATOM | 1702 | C   | GLU | A | 221 | 0 | 20.522 | 28.066 | 28.727 | 1.00 | 13.77 |

|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 1703 | O   | GLU | A | 221 | 0 | 19.799 | 27.301 | 28.068 | 1.00 | 14.06 |
|    | ATOM | 1704 | CB  | GLU | A | 221 | 0 | 22.436 | 28.666 | 27.318 | 1.00 | 12.73 |
|    | ATOM | 1705 | CG  | GLU | A | 221 | 0 | 22.280 | 30.178 | 27.325 | 1.00 | 12.94 |
|    | ATOM | 1706 | CD  | GLU | A | 221 | 0 | 22.018 | 30.783 | 25.969 | 1.00 | 13.84 |
| 5  | ATOM | 1707 | OE1 | GLU | A | 221 | 0 | 22.345 | 30.269 | 24.887 | 1.00 | 12.66 |
|    | ATOM | 1708 | OE2 | GLU | A | 221 | 0 | 21.386 | 31.862 | 25.936 | 1.00 | 14.80 |
|    | ATOM | 1709 | N   | VAL | A | 222 | 0 | 20.062 | 29.091 | 29.434 | 1.00 | 13.89 |
|    | ATOM | 1710 | CA  | VAL | A | 222 | 0 | 18.632 | 29.350 | 29.534 | 1.00 | 14.13 |
|    | ATOM | 1711 | C   | VAL | A | 222 | 0 | 18.409 | 30.853 | 29.493 | 1.00 | 13.87 |
| 10 | ATOM | 1712 | O   | VAL | A | 222 | 0 | 18.900 | 31.657 | 30.300 | 1.00 | 11.55 |
|    | ATOM | 1713 | CB  | VAL | A | 222 | 0 | 18.003 | 28.649 | 30.737 | 1.00 | 16.86 |
|    | ATOM | 1714 | CG1 | VAL | A | 222 | 0 | 18.730 | 28.941 | 32.017 | 1.00 | 19.16 |
|    | ATOM | 1715 | CG2 | VAL | A | 222 | 0 | 16.575 | 29.120 | 31.033 | 1.00 | 18.45 |
|    | ATOM | 1716 | N   | ASP | A | 223 | 0 | 17.631 | 31.267 | 28.481 | 1.00 | 11.69 |
| 15 | ATOM | 1717 | CA  | ASP | A | 223 | 0 | 17.245 | 32.673 | 28.386 | 1.00 | 13.60 |
|    | ATOM | 1718 | C   | ASP | A | 223 | 0 | 18.472 | 33.598 | 28.548 | 1.00 | 14.44 |
|    | ATOM | 1719 | O   | ASP | A | 223 | 0 | 18.423 | 34.552 | 29.336 | 1.00 | 12.75 |
|    | ATOM | 1720 | CB  | ASP | A | 223 | 0 | 16.161 | 33.033 | 29.417 | 1.00 | 12.59 |
|    | ATOM | 1721 | CG  | ASP | A | 223 | 0 | 14.845 | 32.279 | 29.364 | 1.00 | 14.64 |
| 20 | ATOM | 1722 | OD1 | ASP | A | 223 | 0 | 14.697 | 31.397 | 28.493 | 1.00 | 13.34 |
|    | ATOM | 1723 | OD2 | ASP | A | 223 | 0 | 13.858 | 32.463 | 30.156 | 1.00 | 13.85 |
|    | ATOM | 1724 | N   | GLY | A | 224 | 0 | 19.544 | 33.372 | 27.767 | 1.00 | 13.49 |
|    | ATOM | 1725 | CA  | GLY | A | 224 | 0 | 20.728 | 34.213 | 27.770 | 1.00 | 12.85 |
|    | ATOM | 1726 | C   | GLY | A | 224 | 0 | 21.562 | 34.112 | 29.049 | 1.00 | 13.00 |
| 25 | ATOM | 1727 | O   | GLY | A | 224 | 0 | 22.326 | 35.040 | 29.317 | 1.00 | 13.97 |
|    | ATOM | 1728 | N   | GLU | A | 225 | 0 | 21.370 | 33.105 | 29.875 | 1.00 | 11.78 |
|    | ATOM | 1729 | CA  | GLU | A | 225 | 0 | 22.068 | 32.888 | 31.114 | 1.00 | 14.97 |
|    | ATOM | 1730 | C   | GLU | A | 225 | 0 | 22.609 | 31.447 | 31.106 | 1.00 | 16.73 |
|    | ATOM | 1731 | O   | GLU | A | 225 | 0 | 21.858 | 30.498 | 30.849 | 1.00 | 15.88 |
| 30 | ATOM | 1732 | CB  | GLU | A | 225 | 0 | 21.174 | 33.062 | 32.358 | 1.00 | 16.54 |
|    | ATOM | 1733 | CG  | GLU | A | 225 | 0 | 20.509 | 34.424 | 32.534 | 1.00 | 16.30 |
|    | ATOM | 1734 | CD  | GLU | A | 225 | 0 | 21.492 | 35.546 | 32.823 | 1.00 | 17.57 |
|    | ATOM | 1735 | OE1 | GLU | A | 225 | 0 | 22.450 | 35.254 | 33.561 | 1.00 | 18.76 |
|    | ATOM | 1736 | OE2 | GLU | A | 225 | 0 | 21.360 | 36.711 | 32.360 | 1.00 | 17.77 |
| 35 | ATOM | 1737 | N   | LEU | A | 226 | 0 | 23.922 | 31.285 | 31.324 | 1.00 | 16.90 |
|    | ATOM | 1738 | CA  | LEU | A | 226 | 0 | 24.526 | 29.955 | 31.318 | 1.00 | 15.50 |
|    | ATOM | 1739 | C   | LEU | A | 226 | 0 | 24.183 | 29.127 | 32.540 | 1.00 | 15.04 |
|    | ATOM | 1740 | O   | LEU | A | 226 | 0 | 24.002 | 29.648 | 33.652 | 1.00 | 15.17 |

|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 1741 | CB  | LEU | A | 226 | 0 | 26.062 | 30.008 | 31.216 | 1.00 | 15.36 |
|    | ATOM | 1742 | CG  | LEU | A | 226 | 0 | 26.567 | 30.741 | 29.958 | 1.00 | 17.95 |
|    | ATOM | 1743 | CD1 | LEU | A | 226 | 0 | 28.076 | 30.876 | 29.979 | 1.00 | 18.77 |
|    | ATOM | 1744 | CD2 | LEU | A | 226 | 0 | 26.111 | 30.029 | 28.687 | 1.00 | 17.36 |
| 5  | ATOM | 1745 | N   | THR | A | 227 | 0 | 24.119 | 27.799 | 32.332 | 1.00 | 13.62 |
|    | ATOM | 1746 | CA  | THR | A | 227 | 0 | 23.848 | 26.930 | 33.479 | 1.00 | 13.72 |
|    | ATOM | 1747 | C   | THR | A | 227 | 0 | 24.936 | 25.851 | 33.528 | 1.00 | 14.30 |
|    | ATOM | 1748 | O   | THR | A | 227 | 0 | 25.732 | 25.629 | 32.592 | 1.00 | 14.28 |
|    | ATOM | 1749 | CB  | THR | A | 227 | 0 | 22.478 | 26.217 | 33.352 | 1.00 | 14.35 |
| 10 | ATOM | 1750 | OG1 | THR | A | 227 | 0 | 22.506 | 25.385 | 32.178 | 1.00 | 13.68 |
|    | ATOM | 1751 | CG2 | THR | A | 227 | 0 | 21.284 | 27.161 | 33.180 | 1.00 | 12.29 |
|    | ATOM | 1752 | N   | GLU | A | 228 | 0 | 24.960 | 25.136 | 34.625 | 1.00 | 14.73 |
|    | ATOM | 1753 | CA  | GLU | A | 228 | 0 | 25.765 | 23.907 | 34.714 | 1.00 | 17.32 |
|    | ATOM | 1754 | C   | GLU | A | 228 | 0 | 25.110 | 22.971 | 33.680 | 1.00 | 17.30 |
| 15 | ATOM | 1755 | O   | GLU | A | 228 | 0 | 23.917 | 23.035 | 33.472 | 1.00 | 16.97 |
|    | ATOM | 1756 | CB  | GLU | A | 228 | 0 | 25.617 | 23.315 | 36.114 | 1.00 | 16.58 |
|    | ATOM | 1757 | CG  | GLU | A | 228 | 0 | 26.493 | 23.979 | 37.186 | 1.00 | 18.10 |
|    | ATOM | 1758 | CD  | GLU | A | 228 | 0 | 26.236 | 23.458 | 38.575 | 1.00 | 20.92 |
|    | ATOM | 1759 | OE1 | GLU | A | 228 | 0 | 25.469 | 22.470 | 38.755 | 1.00 | 23.38 |
| 20 | ATOM | 1760 | OE2 | GLU | A | 228 | 0 | 26.769 | 23.997 | 39.564 | 1.00 | 21.26 |
|    | ATOM | 1761 | N   | PRO | A | 229 | 0 | 25.867 | 22.158 | 32.984 | 1.00 | 16.91 |
|    | ATOM | 1762 | CA  | PRO | A | 229 | 0 | 25.369 | 21.207 | 31.992 | 1.00 | 16.37 |
|    | ATOM | 1763 | C   | PRO | A | 229 | 0 | 24.351 | 20.275 | 32.599 | 1.00 | 16.24 |
|    | ATOM | 1764 | O   | PRO | A | 229 | 0 | 24.624 | 19.652 | 33.619 | 1.00 | 15.76 |
| 25 | ATOM | 1765 | CB  | PRO | A | 229 | 0 | 26.612 | 20.469 | 31.419 | 1.00 | 15.97 |
|    | ATOM | 1766 | CG  | PRO | A | 229 | 0 | 27.701 | 21.509 | 31.741 | 1.00 | 15.92 |
|    | ATOM | 1767 | CD  | PRO | A | 229 | 0 | 27.337 | 22.141 | 33.083 | 1.00 | 14.86 |
|    | ATOM | 1768 | N   | HIS | A | 230 | 0 | 23.140 | 20.164 | 32.038 | 1.00 | 15.58 |
|    | ATOM | 1769 | CA  | HIS | A | 230 | 0 | 22.090 | 19.325 | 32.618 | 1.00 | 15.01 |
| 30 | ATOM | 1770 | C   | HIS | A | 230 | 0 | 21.354 | 18.610 | 31.488 | 1.00 | 13.55 |
|    | ATOM | 1771 | O   | HIS | A | 230 | 0 | 20.756 | 19.192 | 30.590 | 1.00 | 13.47 |
|    | ATOM | 1772 | CB  | HIS | A | 230 | 0 | 21.172 | 20.164 | 33.510 | 1.00 | 15.89 |
|    | ATOM | 1773 | CG  | HIS | A | 230 | 0 | 20.045 | 19.341 | 34.064 | 1.00 | 18.32 |
|    | ATOM | 1774 | ND1 | HIS | A | 230 | 0 | 20.252 | 18.347 | 35.004 | 1.00 | 18.14 |
| 35 | ATOM | 1775 | CD2 | HIS | A | 230 | 0 | 18.713 | 19.328 | 33.791 | 1.00 | 17.75 |
|    | ATOM | 1776 | CE1 | HIS | A | 230 | 0 | 19.121 | 17.768 | 35.310 | 1.00 | 16.33 |
|    | ATOM | 1777 | NE2 | HIS | A | 230 | 0 | 18.173 | 18.344 | 34.609 | 1.00 | 17.85 |
|    | ATOM | 1778 | N   | THR | A | 231 | 0 | 21.496 | 17.304 | 31.458 | 1.00 | 12.94 |



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|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 1779 | CA  | THR | A | 231 | 0 | 20.995 | 16.474 | 30.346 | 1.00 | 14.15 |
|    | ATOM | 1780 | C   | THR | A | 231 | 0 | 19.620 | 15.890 | 30.547 | 1.00 | 13.41 |
|    | ATOM | 1781 | O   | THR | A | 231 | 0 | 19.293 | 15.401 | 31.616 | 1.00 | 14.89 |
|    | ATOM | 1782 | CB  | THR | A | 231 | 0 | 22.040 | 15.364 | 30.060 | 1.00 | 13.73 |
| 5  | ATOM | 1783 | OG1 | THR | A | 231 | 0 | 23.314 | 16.023 | 29.852 | 1.00 | 14.77 |
|    | ATOM | 1784 | CG2 | THR | A | 231 | 0 | 21.655 | 14.600 | 28.818 | 1.00 | 13.06 |
|    | ATOM | 1785 | N   | VAL | A | 232 | 0 | 18.776 | 15.954 | 29.549 | 1.00 | 12.86 |
|    | ATOM | 1786 | CA  | VAL | A | 232 | 0 | 17.374 | 15.505 | 29.665 | 1.00 | 13.44 |
|    | ATOM | 1787 | C   | VAL | A | 232 | 0 | 16.999 | 14.966 | 28.319 | 1.00 | 14.96 |
| 10 | ATOM | 1788 | O   | VAL | A | 232 | 0 | 17.790 | 15.258 | 27.390 | 1.00 | 14.12 |
|    | ATOM | 1789 | CB  | VAL | A | 232 | 0 | 16.771 | 16.910 | 30.000 | 1.00 | 17.41 |
|    | ATOM | 1790 | CG1 | VAL | A | 232 | 0 | 16.075 | 17.587 | 28.856 | 1.00 | 14.66 |
|    | ATOM | 1791 | CG2 | VAL | A | 232 | 0 | 16.158 | 16.935 | 31.371 | 1.00 | 15.66 |
|    | ATOM | 1792 | N   | ASP | A | 233 | 0 | 15.874 | 14.277 | 28.153 | 1.00 | 14.01 |
| 15 | ATOM | 1793 | CA  | ASP | A | 233 | 0 | 15.405 | 13.803 | 26.874 | 1.00 | 14.73 |
|    | ATOM | 1794 | C   | ASP | A | 233 | 0 | 14.353 | 14.718 | 26.245 | 1.00 | 14.74 |
|    | ATOM | 1795 | O   | ASP | A | 233 | 0 | 14.187 | 14.731 | 25.027 | 1.00 | 13.41 |
|    | ATOM | 1796 | CB  | ASP | A | 233 | 0 | 14.640 | 12.465 | 27.046 | 1.00 | 16.54 |
|    | ATOM | 1797 | CG  | ASP | A | 233 | 0 | 15.637 | 11.417 | 27.536 | 1.00 | 19.27 |
| 20 | ATOM | 1798 | OD1 | ASP | A | 233 | 0 | 16.543 | 11.145 | 26.732 | 1.00 | 20.98 |
|    | ATOM | 1799 | OD2 | ASP | A | 233 | 0 | 15.536 | 10.945 | 28.667 | 1.00 | 19.27 |
|    | ATOM | 1800 | N   | ARG | A | 234 | 0 | 13.595 | 15.386 | 27.122 | 1.00 | 13.79 |
|    | ATOM | 1801 | CA  | ARG | A | 234 | 0 | 12.514 | 16.199 | 26.598 | 1.00 | 16.36 |
|    | ATOM | 1802 | C   | ARG | A | 234 | 0 | 12.258 | 17.426 | 27.472 | 1.00 | 15.17 |
| 25 | ATOM | 1803 | O   | ARG | A | 234 | 0 | 12.418 | 17.390 | 28.686 | 1.00 | 13.96 |
|    | ATOM | 1804 | CB  | ARG | A | 234 | 0 | 11.265 | 15.330 | 26.482 | 1.00 | 19.23 |
|    | ATOM | 1805 | CG  | ARG | A | 234 | 0 | 10.104 | 16.036 | 25.788 | 1.00 | 22.25 |
|    | ATOM | 1806 | CD  | ARG | A | 234 | 0 | 8.981  | 15.023 | 25.506 | 1.00 | 24.68 |
|    | ATOM | 1807 | NE  | ARG | A | 234 | 0 | 8.157  | 14.983 | 26.705 | 1.00 | 28.27 |
| 30 | ATOM | 1808 | CZ  | ARG | A | 234 | 0 | 6.845  | 14.828 | 26.719 | 1.00 | 28.66 |
|    | ATOM | 1809 | NH1 | ARG | A | 234 | 0 | 6.291  | 14.833 | 27.909 | 1.00 | 30.08 |
|    | ATOM | 1810 | NH2 | ARG | A | 234 | 0 | 6.191  | 14.662 | 25.587 | 1.00 | 30.24 |
|    | ATOM | 1811 | N   | LEU | A | 235 | 0 | 11.874 | 18.524 | 26.816 | 1.00 | 13.90 |
|    | ATOM | 1812 | CA  | LEU | A | 235 | 0 | 11.619 | 19.742 | 27.607 | 1.00 | 13.15 |
| 35 | ATOM | 1813 | C   | LEU | A | 235 | 0 | 10.390 | 20.430 | 27.041 | 1.00 | 11.49 |
|    | ATOM | 1814 | O   | LEU | A | 235 | 0 | 10.025 | 20.304 | 25.873 | 1.00 | 11.08 |
|    | ATOM | 1815 | CB  | LEU | A | 235 | 0 | 12.825 | 20.630 | 27.695 | 1.00 | 14.39 |
|    | ATOM | 1816 | CG  | LEU | A | 235 | 0 | 13.459 | 21.645 | 26.801 | 1.00 | 17.19 |

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|      |      |     |     |   |     |   |        |        |        |      |       |
|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
| ATOM | 1817 | CD1 | LEU | A | 235 | 0 | 14.795 | 21.218 | 26.197 | 1.00 | 16.98 |
| ATOM | 1818 | CD2 | LEU | A | 235 | 0 | 12.586 | 22.219 | 25.685 | 1.00 | 18.24 |
| ATOM | 1819 | N   | GLN | A | 236 | 0 | 9.769  | 21.152 | 27.949 | 1.00 | 12.74 |
| ATOM | 1820 | CA  | GLN | A | 236 | 0 | 8.576  | 21.944 | 27.616 | 1.00 | 13.45 |
| ATOM | 1821 | C   | GLN | A | 236 | 0 | 9.005  | 23.390 | 27.459 | 1.00 | 12.21 |
| ATOM | 1822 | O   | GLN | A | 236 | 0 | 9.606  | 23.939 | 28.406 | 1.00 | 13.90 |
| ATOM | 1823 | CB  | GLN | A | 236 | 0 | 7.525  | 21.770 | 28.741 | 1.00 | 12.06 |
| ATOM | 1824 | CG  | GLN | A | 236 | 0 | 6.197  | 22.276 | 28.238 | 1.00 | 14.12 |
| ATOM | 1825 | CD  | GLN | A | 236 | 0 | 5.025  | 22.108 | 29.205 | 1.00 | 13.35 |
| ATOM | 1826 | OE1 | GLN | A | 236 | 0 | 3.893  | 22.215 | 28.721 | 1.00 | 15.61 |
| ATOM | 1827 | NE2 | GLN | A | 236 | 0 | 5.226  | 21.912 | 30.463 | 1.00 | 12.00 |
| ATOM | 1828 | N   | ILE | A | 237 | 0 | 8.748  | 24.011 | 26.311 | 1.00 | 12.17 |
| ATOM | 1829 | CA  | ILE | A | 237 | 0 | 9.213  | 25.390 | 26.156 | 1.00 | 12.41 |
| ATOM | 1830 | C   | ILE | A | 237 | 0 | 8.061  | 26.376 | 25.953 | 1.00 | 13.14 |
| ATOM | 1831 | O   | ILE | A | 237 | 0 | 7.283  | 26.310 | 24.990 | 1.00 | 13.64 |
| ATOM | 1832 | CB  | ILE | A | 237 | 0 | 10.255 | 25.437 | 25.022 | 1.00 | 11.03 |
| ATOM | 1833 | CG1 | ILE | A | 237 | 0 | 10.947 | 26.793 | 24.960 | 1.00 | 11.84 |
| ATOM | 1834 | CG2 | ILE | A | 237 | 0 | 9.615  | 25.086 | 23.662 | 1.00 | 10.02 |
| ATOM | 1835 | CD1 | ILE | A | 237 | 0 | 12.041 | 26.953 | 23.902 | 1.00 | 11.23 |
| ATOM | 1836 | N   | PHE | A | 238 | 0 | 8.037  | 27.414 | 26.765 | 1.00 | 12.83 |
| ATOM | 1837 | CA  | PHE | A | 238 | 0 | 6.979  | 28.431 | 26.714 | 1.00 | 13.23 |
| ATOM | 1838 | C   | PHE | A | 238 | 0 | 7.382  | 29.683 | 25.957 | 1.00 | 13.99 |
| ATOM | 1839 | O   | PHE | A | 238 | 0 | 8.530  | 29.848 | 25.545 | 1.00 | 13.87 |
| ATOM | 1840 | CB  | PHE | A | 238 | 0 | 6.592  | 28.848 | 28.145 | 1.00 | 12.72 |
| ATOM | 1841 | CG  | PHE | A | 238 | 0 | 6.176  | 27.691 | 28.993 | 1.00 | 14.51 |
| ATOM | 1842 | CD1 | PHE | A | 238 | 0 | 7.098  | 26.957 | 29.710 | 1.00 | 14.84 |
| ATOM | 1843 | CD2 | PHE | A | 238 | 0 | 4.836  | 27.314 | 29.078 | 1.00 | 15.50 |
| ATOM | 1844 | CE1 | PHE | A | 238 | 0 | 6.748  | 25.882 | 30.497 | 1.00 | 13.87 |
| ATOM | 1845 | CE2 | PHE | A | 238 | 0 | 4.468  | 26.236 | 29.862 | 1.00 | 14.62 |
| ATOM | 1846 | CZ  | PHE | A | 238 | 0 | 5.423  | 25.528 | 30.568 | 1.00 | 15.15 |
| ATOM | 1847 | N   | THR | A | 239 | 0 | 6.388  | 30.494 | 25.604 | 1.00 | 14.16 |
| ATOM | 1848 | CA  | THR | A | 239 | 0 | 6.543  | 31.678 | 24.806 | 1.00 | 13.44 |
| ATOM | 1849 | C   | THR | A | 239 | 0 | 7.832  | 32.453 | 25.106 | 1.00 | 11.74 |
| ATOM | 1850 | O   | THR | A | 239 | 0 | 8.012  | 32.950 | 26.218 | 1.00 | 10.47 |
| ATOM | 1851 | CB  | THR | A | 239 | 0 | 5.381  | 32.695 | 24.978 | 1.00 | 15.55 |
| ATOM | 1852 | OG1 | THR | A | 239 | 0 | 5.258  | 33.008 | 26.359 | 1.00 | 17.88 |
| ATOM | 1853 | CG2 | THR | A | 239 | 0 | 4.055  | 32.131 | 24.478 | 1.00 | 16.75 |
| ATOM | 1854 | N   | GLY | A | 240 | 0 | 8.672  | 32.593 | 24.078 | 1.00 | 7.94  |

|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 1855 | CA  | GLY | A | 240 | 0 | 9.877  | 33.348 | 24.193 | 1.00 | 10.08 |
|    | ATOM | 1856 | C   | GLY | A | 240 | 0 | 11.039 | 32.865 | 25.041 | 1.00 | 11.34 |
|    | ATOM | 1857 | O   | GLY | A | 240 | 0 | 11.977 | 33.650 | 25.216 | 1.00 | 11.02 |
|    | ATOM | 1858 | N   | GLN | A | 241 | 0 | 10.990 | 31.646 | 25.592 | 1.00 | 9.73  |
| 5  | ATOM | 1859 | CA  | GLN | A | 241 | 0 | 12.067 | 31.090 | 26.364 | 1.00 | 9.59  |
|    | ATOM | 1860 | C   | GLN | A | 241 | 0 | 13.114 | 30.587 | 25.342 | 1.00 | 10.56 |
|    | ATOM | 1861 | O   | GLN | A | 241 | 0 | 12.823 | 30.467 | 24.126 | 1.00 | 8.44  |
|    | ATOM | 1862 | CB  | GLN | A | 241 | 0 | 11.604 | 29.965 | 27.285 | 1.00 | 10.57 |
|    | ATOM | 1863 | CG  | GLN | A | 241 | 0 | 10.820 | 30.363 | 28.523 | 1.00 | 10.54 |
| 10 | ATOM | 1864 | CD  | GLN | A | 241 | 0 | 10.341 | 29.190 | 29.341 | 1.00 | 12.22 |
|    | ATOM | 1865 | OE1 | GLN | A | 241 | 0 | 10.118 | 28.077 | 28.815 | 1.00 | 13.21 |
|    | ATOM | 1866 | NE2 | GLN | A | 241 | 0 | 10.220 | 29.466 | 30.639 | 1.00 | 11.74 |
|    | ATOM | 1867 | N   | ARG | A | 242 | 0 | 14.372 | 30.492 | 25.774 | 1.00 | 9.00  |
|    | ATOM | 1868 | CA  | ARG | A | 242 | 0 | 15.388 | 29.992 | 24.834 | 1.00 | 11.01 |
| 15 | ATOM | 1869 | C   | ARG | A | 242 | 0 | 16.210 | 28.966 | 25.609 | 1.00 | 11.30 |
| 20 | ATOM | 1870 | O   | ARG | A | 242 | 0 | 16.292 | 29.133 | 26.816 | 1.00 | 9.51  |
| 25 | ATOM | 1871 | CB  | ARG | A | 242 | 0 | 16.324 | 31.043 | 24.265 | 1.00 | 12.77 |
|    | ATOM | 1872 | CG  | ARG | A | 242 | 0 | 15.694 | 32.128 | 23.364 | 1.00 | 12.52 |
|    | ATOM | 1873 | CD  | ARG | A | 242 | 0 | 15.066 | 33.249 | 24.138 | 1.00 | 10.81 |
|    | ATOM | 1874 | NE  | ARG | A | 242 | 0 | 15.957 | 34.126 | 24.892 | 1.00 | 10.80 |
|    | ATOM | 1875 | CZ  | ARG | A | 242 | 0 | 15.630 | 34.761 | 26.002 | 1.00 | 11.36 |
|    | ATOM | 1876 | NH1 | ARG | A | 242 | 0 | 16.486 | 35.548 | 26.648 | 1.00 | 7.98  |
|    | ATOM | 1877 | NH2 | ARG | A | 242 | 0 | 14.365 | 34.589 | 26.489 | 1.00 | 12.78 |
|    | ATOM | 1878 | N   | TYR | A | 243 | 0 | 16.717 | 27.934 | 24.942 | 1.00 | 11.61 |
|    | ATOM | 1879 | CA  | TYR | A | 243 | 0 | 17.631 | 27.009 | 25.610 | 1.00 | 12.54 |
|    | ATOM | 1880 | C   | TYR | A | 243 | 0 | 18.819 | 26.762 | 24.650 | 1.00 | 14.46 |
|    | ATOM | 1881 | O   | TYR | A | 243 | 0 | 18.568 | 26.656 | 23.435 | 1.00 | 16.11 |
|    | ATOM | 1882 | CB  | TYR | A | 243 | 0 | 17.015 | 25.638 | 25.934 | 1.00 | 11.09 |
|    | ATOM | 1883 | CG  | TYR | A | 243 | 0 | 16.007 | 25.667 | 27.054 | 1.00 | 12.11 |
| 30 | ATOM | 1884 | CD1 | TYR | A | 243 | 0 | 14.641 | 25.825 | 26.843 | 1.00 | 12.88 |
|    | ATOM | 1885 | CD2 | TYR | A | 243 | 0 | 16.440 | 25.575 | 28.371 | 1.00 | 12.11 |
|    | ATOM | 1886 | CE1 | TYR | A | 243 | 0 | 13.748 | 25.869 | 27.915 | 1.00 | 12.71 |
|    | ATOM | 1887 | CE2 | TYR | A | 243 | 0 | 15.560 | 25.582 | 29.436 | 1.00 | 12.50 |
|    | ATOM | 1888 | CZ  | TYR | A | 243 | 0 | 14.205 | 25.738 | 29.188 | 1.00 | 12.29 |
| 35 | ATOM | 1889 | OH  | TYR | A | 243 | 0 | 13.379 | 25.789 | 30.286 | 1.00 | 13.65 |
|    | ATOM | 1890 | N   | SER | A | 244 | 0 | 20.059 | 26.734 | 25.144 | 1.00 | 12.78 |
|    | ATOM | 1891 | CA  | SER | A | 244 | 0 | 21.117 | 26.212 | 24.268 | 1.00 | 13.22 |
|    | ATOM | 1892 | C   | SER | A | 244 | 0 | 21.333 | 24.779 | 24.814 | 1.00 | 11.06 |

|    |      |      |     |           |   |        |        |        |      |       |
|----|------|------|-----|-----------|---|--------|--------|--------|------|-------|
|    | ATOM | 1893 | O   | SER A 244 | 0 | 21.377 | 24.604 | 26.018 | 1.00 | 11.27 |
|    | ATOM | 1894 | CB  | SER A 244 | 0 | 22.485 | 26.907 | 24.308 | 1.00 | 14.46 |
|    | ATOM | 1895 | OG  | SER A 244 | 0 | 22.551 | 28.029 | 23.463 | 1.00 | 13.59 |
|    | ATOM | 1896 | N   | PHE A 245 | 0 | 21.484 | 23.780 | 23.983 | 1.00 | 11.89 |
| 5  | ATOM | 1897 | CA  | PHE A 245 | 0 | 21.772 | 22.437 | 24.452 | 1.00 | 13.14 |
|    | ATOM | 1898 | C   | PHE A 245 | 0 | 22.867 | 21.857 | 23.546 | 1.00 | 12.32 |
|    | ATOM | 1899 | O   | PHE A 245 | 0 | 22.890 | 22.128 | 22.354 | 1.00 | 11.11 |
|    | ATOM | 1900 | CB  | PHE A 245 | 0 | 20.554 | 21.495 | 24.526 | 1.00 | 11.40 |
|    | ATOM | 1901 | CG  | PHE A 245 | 0 | 19.915 | 21.236 | 23.195 | 1.00 | 11.98 |
| 10 | ATOM | 1902 | CD1 | PHE A 245 | 0 | 18.815 | 21.993 | 22.813 | 1.00 | 13.38 |
|    | ATOM | 1903 | CD2 | PHE A 245 | 0 | 20.349 | 20.236 | 22.351 | 1.00 | 11.45 |
|    | ATOM | 1904 | CE1 | PHE A 245 | 0 | 18.216 | 21.773 | 21.588 | 1.00 | 12.84 |
|    | ATOM | 1905 | CE2 | PHE A 245 | 0 | 19.759 | 20.000 | 21.129 | 1.00 | 11.48 |
|    | ATOM | 1906 | CZ  | PHE A 245 | 0 | 18.705 | 20.796 | 20.743 | 1.00 | 12.65 |
| 15 | ATOM | 1907 | N   | VAL A 246 | 0 | 23.742 | 21.073 | 24.169 | 1.00 | 13.51 |
|    | ATOM | 1908 | CA  | VAL A 246 | 0 | 24.775 | 20.427 | 23.341 | 1.00 | 13.37 |
|    | ATOM | 1909 | C   | VAL A 246 | 0 | 24.096 | 19.177 | 22.783 | 1.00 | 12.47 |
|    | ATOM | 1910 | O   | VAL A 246 | 0 | 23.505 | 18.425 | 23.540 | 1.00 | 11.41 |
|    | ATOM | 1911 | CB  | VAL A 246 | 0 | 25.990 | 19.984 | 24.190 | 1.00 | 14.96 |
| 20 | ATOM | 1912 | CG1 | VAL A 246 | 0 | 26.995 | 19.186 | 23.364 | 1.00 | 13.75 |
|    | ATOM | 1913 | CG2 | VAL A 246 | 0 | 26.681 | 21.165 | 24.841 | 1.00 | 15.92 |
|    | ATOM | 1914 | N   | LEU A 247 | 0 | 24.160 | 18.996 | 21.490 | 1.00 | 12.97 |
|    | ATOM | 1915 | CA  | LEU A 247 | 0 | 23.766 | 17.833 | 20.785 | 1.00 | 14.32 |
|    | ATOM | 1916 | C   | LEU A 247 | 0 | 25.071 | 17.077 | 20.395 | 1.00 | 14.22 |
| 25 | ATOM | 1917 | O   | LEU A 247 | 0 | 25.954 | 17.529 | 19.664 | 1.00 | 12.45 |
|    | ATOM | 1918 | CB  | LEU A 247 | 0 | 22.980 | 18.109 | 19.505 | 1.00 | 16.00 |
|    | ATOM | 1919 | CG  | LEU A 247 | 0 | 22.514 | 16.786 | 18.835 | 1.00 | 16.80 |
|    | ATOM | 1920 | CD1 | LEU A 247 | 0 | 21.266 | 16.306 | 19.513 | 1.00 | 18.30 |
|    | ATOM | 1921 | CD2 | LEU A 247 | 0 | 22.207 | 16.988 | 17.373 | 1.00 | 18.70 |
| 30 | ATOM | 1922 | N   | ASP A 248 | 0 | 25.144 | 15.886 | 20.926 | 1.00 | 13.56 |
|    | ATOM | 1923 | CA  | ASP A 248 | 0 | 26.278 | 14.980 | 20.727 | 1.00 | 16.65 |
|    | ATOM | 1924 | C   | ASP A 248 | 0 | 25.916 | 14.072 | 19.581 | 1.00 | 16.18 |
|    | ATOM | 1925 | O   | ASP A 248 | 0 | 25.095 | 13.166 | 19.813 | 1.00 | 17.60 |
|    | ATOM | 1926 | CB  | ASP A 248 | 0 | 26.536 | 14.229 | 22.036 | 1.00 | 17.83 |
| 35 | ATOM | 1927 | CG  | ASP A 248 | 0 | 27.798 | 13.359 | 22.024 | 1.00 | 21.77 |
|    | ATOM | 1928 | OD1 | ASP A 248 | 0 | 28.231 | 12.967 | 23.140 | 1.00 | 24.11 |
|    | ATOM | 1929 | OD2 | ASP A 248 | 0 | 28.345 | 13.060 | 20.950 | 1.00 | 21.25 |
|    | ATOM | 1930 | N   | ALA A 249 | 0 | 26.414 | 14.277 | 18.369 | 1.00 | 15.85 |

|    |      |      |     |           |   |        |        |        |      |       |
|----|------|------|-----|-----------|---|--------|--------|--------|------|-------|
|    | ATOM | 1931 | CA  | ALA A 249 | 0 | 25.982 | 13.416 | 17.255 | 1.00 | 17.99 |
|    | ATOM | 1932 | C   | ALA A 249 | 0 | 26.698 | 12.049 | 17.306 | 1.00 | 20.21 |
|    | ATOM | 1933 | O   | ALA A 249 | 0 | 27.569 | 11.766 | 16.485 | 1.00 | 19.11 |
|    | ATOM | 1934 | CB  | ALA A 249 | 0 | 26.165 | 14.126 | 15.930 | 1.00 | 14.57 |
| 5  | ATOM | 1935 | N   | ASN A 250 | 0 | 26.273 | 11.223 | 18.253 | 1.00 | 21.66 |
|    | ATOM | 1936 | CA  | ASN A 250 | 0 | 26.861 | 9.961  | 18.581 | 1.00 | 25.53 |
|    | ATOM | 1937 | C   | ASN A 250 | 0 | 26.061 | 8.721  | 18.202 | 1.00 | 27.30 |
|    | ATOM | 1938 | O   | ASN A 250 | 0 | 26.344 | 7.645  | 18.756 | 1.00 | 29.42 |
|    | ATOM | 1939 | CB  | ASN A 250 | 0 | 27.108 | 9.912  | 20.104 | 1.00 | 25.83 |
| 10 | ATOM | 1940 | CG  | ASN A 250 | 0 | 25.888 | 9.968  | 20.978 | 1.00 | 28.76 |
|    | ATOM | 1941 | OD1 | ASN A 250 | 0 | 24.757 | 10.156 | 20.527 | 1.00 | 29.90 |
|    | ATOM | 1942 | ND2 | ASN A 250 | 0 | 26.042 | 9.826  | 22.306 | 1.00 | 29.52 |
|    | ATOM | 1943 | N   | GLN A 251 | 0 | 25.089 | 8.841  | 17.302 | 1.00 | 26.74 |
|    | ATOM | 1944 | CA  | GLN A 251 | 0 | 24.239 | 7.712  | 16.934 | 1.00 | 23.48 |
| 15 | ATOM | 1945 | C   | GLN A 251 | 0 | 24.583 | 7.311  | 15.510 | 1.00 | 21.73 |
|    | ATOM | 1946 | O   | GLN A 251 | 0 | 25.333 | 8.009  | 14.843 | 1.00 | 19.39 |
|    | ATOM | 1947 | CB  | GLN A 251 | 0 | 22.757 | 8.104  | 17.022 | 1.00 | 24.79 |
|    | ATOM | 1948 | CG  | GLN A 251 | 0 | 22.333 | 8.701  | 18.360 | 1.00 | 25.14 |
|    | ATOM | 1949 | CD  | GLN A 251 | 0 | 22.430 | 7.693  | 19.480 | 1.00 | 26.76 |
| 20 | ATOM | 1950 | OE1 | GLN A 251 | 0 | 21.762 | 6.654  | 19.405 | 1.00 | 28.78 |
|    | ATOM | 1951 | NE2 | GLN A 251 | 0 | 23.202 | 7.986  | 20.514 | 1.00 | 26.02 |
|    | ATOM | 1952 | N   | PRO A 252 | 0 | 24.058 | 6.177  | 15.076 | 1.00 | 20.53 |
|    | ATOM | 1953 | CA  | PRO A 252 | 0 | 24.293 | 5.637  | 13.755 | 1.00 | 20.06 |
|    | ATOM | 1954 | C   | PRO A 252 | 0 | 23.940 | 6.671  | 12.702 | 1.00 | 21.83 |
| 25 | ATOM | 1955 | O   | PRO A 252 | 0 | 22.973 | 7.424  | 12.940 | 1.00 | 22.51 |
|    | ATOM | 1956 | CB  | PRO A 252 | 0 | 23.417 | 4.367  | 13.647 | 1.00 | 19.98 |
|    | ATOM | 1957 | CG  | PRO A 252 | 0 | 23.288 | 3.997  | 15.096 | 1.00 | 19.94 |
|    | ATOM | 1958 | CD  | PRO A 252 | 0 | 23.223 | 5.289  | 15.902 | 1.00 | 19.68 |
|    | ATOM | 1959 | N   | VAL A 253 | 0 | 24.663 | 6.728  | 11.584 | 1.00 | 20.85 |
| 30 | ATOM | 1960 | CA  | VAL A 253 | 0 | 24.302 | 7.741  | 10.604 | 1.00 | 22.29 |
|    | ATOM | 1961 | C   | VAL A 253 | 0 | 22.897 | 7.414  | 10.108 | 1.00 | 23.02 |
|    | ATOM | 1962 | O   | VAL A 253 | 0 | 22.593 | 6.289  | 9.753  | 1.00 | 21.37 |
|    | ATOM | 1963 | CB  | VAL A 253 | 0 | 25.298 | 8.065  | 9.494  | 1.00 | 23.22 |
|    | ATOM | 1964 | CG1 | VAL A 253 | 0 | 26.696 | 7.582  | 9.827  | 1.00 | 22.25 |
| 35 | ATOM | 1965 | CG2 | VAL A 253 | 0 | 24.859 | 7.680  | 8.101  | 1.00 | 22.26 |
|    | ATOM | 1966 | N   | ASP A 254 | 0 | 22.012 | 8.422  | 10.159 | 1.00 | 24.32 |
|    | ATOM | 1967 | CA  | ASP A 254 | 0 | 20.613 | 8.176  | 9.786  | 1.00 | 22.09 |
|    | ATOM | 1968 | C   | ASP A 254 | 0 | 19.782 | 9.448  | 9.821  | 1.00 | 20.71 |

|    |      |      |     |           |   |        |        |        |      |       |
|----|------|------|-----|-----------|---|--------|--------|--------|------|-------|
|    | ATOM | 1969 | O   | ASP A 254 | 0 | 20.365 | 10.481 | 10.099 | 1.00 | 18.92 |
|    | ATOM | 1970 | CB  | ASP A 254 | 0 | 20.048 | 7.211  | 10.830 | 1.00 | 23.39 |
|    | ATOM | 1971 | CG  | ASP A 254 | 0 | 18.964 | 6.331  | 10.251 | 1.00 | 24.43 |
|    | ATOM | 1972 | OD1 | ASP A 254 | 0 | 18.355 | 6.663  | 9.239  | 1.00 | 23.21 |
| 5  | ATOM | 1973 | OD2 | ASP A 254 | 0 | 18.736 | 5.244  | 10.816 | 1.00 | 28.26 |
|    | ATOM | 1974 | N   | ASN A 255 | 0 | 18.485 | 9.338  | 9.496  | 1.00 | 18.97 |
|    | ATOM | 1975 | CA  | ASN A 255 | 0 | 17.583 | 10.479 | 9.599  | 1.00 | 17.69 |
|    | ATOM | 1976 | C   | ASN A 255 | 0 | 16.785 | 10.335 | 10.889 | 1.00 | 17.64 |
|    | ATOM | 1977 | O   | ASN A 255 | 0 | 16.390 | 9.204  | 11.249 | 1.00 | 17.75 |
| 10 | ATOM | 1978 | CB  | ASN A 255 | 0 | 16.663 | 10.554 | 8.386  | 1.00 | 17.19 |
|    | ATOM | 1979 | CG  | ASN A 255 | 0 | 17.467 | 10.882 | 7.143  | 1.00 | 17.33 |
|    | ATOM | 1980 | OD1 | ASN A 255 | 0 | 17.891 | 12.023 | 6.932  | 1.00 | 18.05 |
|    | ATOM | 1981 | ND2 | ASN A 255 | 0 | 17.649 | 9.913  | 6.263  | 1.00 | 15.98 |
|    | ATOM | 1982 | N   | TYR A 256 | 0 | 16.657 | 11.403 | 11.684 | 1.00 | 14.89 |
| 15 | ATOM | 1983 | CA  | TYR A 256 | 0 | 15.983 | 11.364 | 12.961 | 1.00 | 12.56 |
|    | ATOM | 1984 | C   | TYR A 256 | 0 | 14.966 | 12.520 | 12.991 | 1.00 | 15.02 |
|    | ATOM | 1985 | O   | TYR A 256 | 0 | 15.208 | 13.637 | 12.509 | 1.00 | 14.49 |
|    | ATOM | 1986 | CB  | TYR A 256 | 0 | 16.867 | 11.479 | 14.216 | 1.00 | 14.85 |
|    | ATOM | 1987 | CG  | TYR A 256 | 0 | 17.883 | 10.349 | 14.316 | 1.00 | 13.96 |
| 20 | ATOM | 1988 | CD1 | TYR A 256 | 0 | 19.030 | 10.427 | 13.529 | 1.00 | 13.97 |
|    | ATOM | 1989 | CD2 | TYR A 256 | 0 | 17.712 | 9.245  | 15.129 | 1.00 | 14.62 |
|    | ATOM | 1990 | CE1 | TYR A 256 | 0 | 19.986 | 9.422  | 13.534 | 1.00 | 13.83 |
|    | ATOM | 1991 | CE2 | TYR A 256 | 0 | 18.667 | 8.224  | 15.170 | 1.00 | 15.31 |
|    | ATOM | 1992 | CZ  | TYR A 256 | 0 | 19.795 | 8.336  | 14.346 | 1.00 | 15.90 |
| 25 | ATOM | 1993 | OH  | TYR A 256 | 0 | 20.763 | 7.341  | 14.337 | 1.00 | 17.15 |
|    | ATOM | 1994 | N   | TRP A 257 | 0 | 13.801 | 12.198 | 13.564 | 1.00 | 13.58 |
|    | ATOM | 1995 | CA  | TRP A 257 | 0 | 12.742 | 13.196 | 13.657 | 1.00 | 14.21 |
|    | ATOM | 1996 | C   | TRP A 257 | 0 | 13.041 | 14.198 | 14.769 | 1.00 | 12.04 |
|    | ATOM | 1997 | O   | TRP A 257 | 0 | 13.382 | 13.811 | 15.878 | 1.00 | 10.46 |
| 30 | ATOM | 1998 | CB  | TRP A 257 | 0 | 11.363 | 12.592 | 13.988 | 1.00 | 12.49 |
|    | ATOM | 1999 | CG  | TRP A 257 | 0 | 10.648 | 11.906 | 12.865 | 1.00 | 13.06 |
|    | ATOM | 2000 | CD1 | TRP A 257 | 0 | 10.315 | 10.568 | 12.879 | 1.00 | 12.86 |
|    | ATOM | 2001 | CD2 | TRP A 257 | 0 | 10.161 | 12.437 | 11.633 | 1.00 | 12.33 |
|    | ATOM | 2002 | NE1 | TRP A 257 | 0 | 9.640  | 10.267 | 11.720 | 1.00 | 13.75 |
| 35 | ATOM | 2003 | CE2 | TRP A 257 | 0 | 9.530  | 11.388 | 10.940 | 1.00 | 13.78 |
|    | ATOM | 2004 | CE3 | TRP A 257 | 0 | 10.173 | 13.691 | 11.035 | 1.00 | 14.13 |
|    | ATOM | 2005 | CZ2 | TRP A 257 | 0 | 8.940  | 11.538 | 9.681  | 1.00 | 13.24 |
|    | ATOM | 2006 | CZ3 | TRP A 257 | 0 | 9.590  | 13.868 | 9.786  | 1.00 | 14.34 |

|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 2007 | CH2 | TRP | A | 257 | 0 | 8.963  | 12.789 | 9.127  | 1.00 | 13.64 |
|    | ATOM | 2008 | N   | ILE | A | 258 | 0 | 12.790 | 15.463 | 14.454 | 1.00 | 12.29 |
|    | ATOM | 2009 | CA  | ILE | A | 258 | 0 | 12.886 | 16.498 | 15.508 | 1.00 | 12.44 |
|    | ATOM | 2010 | C   | ILE | A | 258 | 0 | 11.391 | 16.840 | 15.769 | 1.00 | 12.40 |
| 5  | ATOM | 2011 | O   | ILE | A | 258 | 0 | 10.629 | 17.039 | 14.812 | 1.00 | 12.43 |
|    | ATOM | 2012 | CB  | ILE | A | 258 | 0 | 13.617 | 17.777 | 15.048 | 1.00 | 13.32 |
|    | ATOM | 2013 | CG1 | ILE | A | 258 | 0 | 15.107 | 17.477 | 14.854 | 1.00 | 14.52 |
|    | ATOM | 2014 | CG2 | ILE | A | 258 | 0 | 13.365 | 18.888 | 16.052 | 1.00 | 12.32 |
|    | ATOM | 2015 | CD1 | ILE | A | 258 | 0 | 15.839 | 18.474 | 13.994 | 1.00 | 14.35 |
| 10 | ATOM | 2016 | N   | ARG | A | 259 | 0 | 11.017 | 16.764 | 17.013 | 1.00 | 11.51 |
|    | ATOM | 2017 | CA  | ARG | A | 259 | 0 | 9.610  | 16.832 | 17.407 | 1.00 | 13.43 |
|    | ATOM | 2018 | C   | ARG | A | 259 | 0 | 9.254  | 18.019 | 18.274 | 1.00 | 12.74 |
|    | ATOM | 2019 | O   | ARG | A | 259 | 0 | 9.931  | 18.246 | 19.280 | 1.00 | 12.62 |
|    | ATOM | 2020 | CB  | ARG | A | 259 | 0 | 9.326  | 15.567 | 18.253 | 1.00 | 12.43 |
| 45 | ATOM | 2021 | CG  | ARG | A | 259 | 0 | 9.308  | 14.290 | 17.414 | 1.00 | 15.81 |
|    | ATOM | 2022 | CD  | ARG | A | 259 | 0 | 8.910  | 13.054 | 18.244 | 1.00 | 16.58 |
|    | ATOM | 2023 | NE  | ARG | A | 259 | 0 | 9.204  | 11.818 | 17.528 | 1.00 | 16.91 |
|    | ATOM | 2024 | CZ  | ARG | A | 259 | 0 | 8.475  | 11.187 | 16.616 | 1.00 | 18.43 |
|    | ATOM | 2025 | NH1 | ARG | A | 259 | 0 | 7.285  | 11.657 | 16.239 | 1.00 | 19.39 |
| 20 | ATOM | 2026 | NH2 | ARG | A | 259 | 0 | 8.907  | 10.070 | 16.045 | 1.00 | 17.95 |
|    | ATOM | 2027 | N   | ALA | A | 260 | 0 | 8.226  | 18.764 | 17.884 | 1.00 | 13.12 |
|    | ATOM | 2028 | CA  | ALA | A | 260 | 0 | 7.768  | 19.882 | 18.727 | 1.00 | 12.65 |
|    | ATOM | 2029 | C   | ALA | A | 260 | 0 | 6.237  | 19.763 | 18.802 | 1.00 | 14.47 |
|    | ATOM | 2030 | O   | ALA | A | 260 | 0 | 5.545  | 20.140 | 17.868 | 1.00 | 14.73 |
| 25 | ATOM | 2031 | CB  | ALA | A | 260 | 0 | 8.281  | 21.188 | 18.165 | 1.00 | 9.58  |
|    | ATOM | 2032 | N   | GLN | A | 261 | 0 | 5.690  | 19.225 | 19.870 | 1.00 | 14.78 |
|    | ATOM | 2033 | CA  | GLN | A | 261 | 0 | 4.272  | 19.004 | 20.060 | 1.00 | 16.99 |
|    | ATOM | 2034 | C   | GLN | A | 261 | 0 | 3.606  | 20.154 | 20.803 | 1.00 | 15.01 |
|    | ATOM | 2035 | O   | GLN | A | 261 | 0 | 3.914  | 20.389 | 21.961 | 1.00 | 13.86 |
| 30 | ATOM | 2036 | CB  | GLN | A | 261 | 0 | 4.118  | 17.747 | 20.924 | 1.00 | 20.94 |
|    | ATOM | 2037 | CG  | GLN | A | 261 | 0 | 2.717  | 17.131 | 20.940 | 1.00 | 27.53 |
|    | ATOM | 2038 | CD  | GLN | A | 261 | 0 | 2.721  | 15.991 | 21.947 | 1.00 | 29.63 |
|    | ATOM | 2039 | OE1 | GLN | A | 261 | 0 | 3.152  | 14.887 | 21.682 | 1.00 | 31.60 |
|    | ATOM | 2040 | NE2 | GLN | A | 261 | 0 | 2.331  | 16.255 | 23.188 | 1.00 | 34.91 |
| 35 | ATOM | 2041 | N   | PRO | A | 262 | 0 | 2.663  | 20.820 | 20.167 | 1.00 | 14.60 |
|    | ATOM | 2042 | CA  | PRO | A | 262 | 0 | 1.974  | 21.969 | 20.739 | 1.00 | 15.72 |
|    | ATOM | 2043 | C   | PRO | A | 262 | 0 | 0.921  | 21.568 | 21.757 | 1.00 | 16.25 |
|    | ATOM | 2044 | O   | PRO | A | 262 | 0 | 0.498  | 20.409 | 21.814 | 1.00 | 15.61 |

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|    |      |      |     |     |   |     |   |         |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|---------|--------|--------|------|-------|
|    | ATOM | 2045 | CB  | PRO | A | 262 | 0 | 1.401   | 22.752 | 19.539 | 1.00 | 13.88 |
|    | ATOM | 2046 | CG  | PRO | A | 262 | 0 | 1.168   | 21.608 | 18.563 | 1.00 | 13.62 |
|    | ATOM | 2047 | CD  | PRO | A | 262 | 0 | 2.257   | 20.570 | 18.772 | 1.00 | 13.23 |
|    | ATOM | 2048 | N   | ASN | A | 263 | 0 | 0.570   | 22.481 | 22.665 | 1.00 | 17.25 |
| 5  | ATOM | 2049 | CA  | ASN | A | 263 | 0 | -0.471  | 22.203 | 23.648 | 1.00 | 17.50 |
|    | ATOM | 2050 | C   | ASN | A | 263 | 0 | -1.834  | 22.460 | 22.981 | 1.00 | 18.43 |
|    | ATOM | 2051 | O   | ASN | A | 263 | 0 | -2.810  | 22.121 | 23.608 | 1.00 | 19.35 |
|    | ATOM | 2052 | CB  | ASN | A | 263 | 0 | -0.422  | 22.990 | 24.954 | 1.00 | 16.12 |
|    | ATOM | 2053 | CG  | ASN | A | 263 | 0 | -0.333  | 24.493 | 24.728 | 1.00 | 16.97 |
| 10 | ATOM | 2054 | OD1 | ASN | A | 263 | 0 | 0.236   | 25.002 | 23.751 | 1.00 | 15.54 |
|    | ATOM | 2055 | ND2 | ASN | A | 263 | 0 | -0.905  | 25.269 | 25.653 | 1.00 | 16.31 |
|    | ATOM | 2056 | N   | LYS | A | 264 | 0 | -1.947  | 23.055 | 21.818 | 1.00 | 20.51 |
|    | ATOM | 2057 | CA  | LYS | A | 264 | 0 | -3.256  | 23.208 | 21.180 | 1.00 | 24.76 |
|    | ATOM | 2058 | C   | LYS | A | 264 | 0 | -3.055  | 23.395 | 19.683 | 1.00 | 23.64 |
| 45 | ATOM | 2059 | O   | LYS | A | 264 | 0 | -1.909  | 23.572 | 19.267 | 1.00 | 24.23 |
|    | ATOM | 2060 | CB  | LYS | A | 264 | 0 | -4.038  | 24.393 | 21.775 | 1.00 | 25.87 |
|    | ATOM | 2061 | CG  | LYS | A | 264 | 0 | -3.266  | 25.702 | 21.602 | 1.00 | 28.62 |
|    | ATOM | 2062 | CD  | LYS | A | 264 | 0 | -3.579  | 26.624 | 22.772 | 1.00 | 30.65 |
|    | ATOM | 2063 | CE  | LYS | A | 264 | 0 | -4.114  | 27.960 | 22.283 | 1.00 | 32.62 |
| 20 | ATOM | 2064 | NZ  | LYS | A | 264 | 0 | -4.593  | 28.753 | 23.459 | 1.00 | 34.39 |
|    | ATOM | 2065 | N   | GLY | A | 265 | 0 | -4.112  | 23.386 | 18.892 | 1.00 | 22.60 |
|    | ATOM | 2066 | CA  | GLY | A | 265 | 0 | -3.959  | 23.591 | 17.452 | 1.00 | 22.98 |
|    | ATOM | 2067 | C   | GLY | A | 265 | 0 | -5.190  | 23.002 | 16.758 | 1.00 | 23.95 |
|    | ATOM | 2068 | O   | GLY | A | 265 | 0 | -5.904  | 22.202 | 17.362 | 1.00 | 22.64 |
| 25 | ATOM | 2069 | N   | ARG | A | 266 | 0 | -5.398  | 23.434 | 15.537 | 1.00 | 24.60 |
|    | ATOM | 2070 | CA  | ARG | A | 266 | 0 | -6.527  | 23.051 | 14.734 | 1.00 | 26.24 |
|    | ATOM | 2071 | C   | ARG | A | 266 | 0 | -6.412  | 21.605 | 14.272 | 1.00 | 27.29 |
|    | ATOM | 2072 | O   | ARG | A | 266 | 0 | -5.329  | 21.074 | 14.015 | 1.00 | 25.41 |
|    | ATOM | 2073 | CB  | ARG | A | 266 | 0 | -6.628  | 23.903 | 13.469 | 1.00 | 30.71 |
| 30 | ATOM | 2074 | CG  | ARG | A | 266 | 0 | -7.065  | 25.334 | 13.563 | 1.00 | 35.66 |
|    | ATOM | 2075 | CD  | ARG | A | 266 | 0 | -8.161  | 25.673 | 12.539 | 1.00 | 40.48 |
|    | ATOM | 2076 | NE  | ARG | A | 266 | 0 | -9.379  | 25.957 | 13.286 | 1.00 | 45.08 |
|    | ATOM | 2077 | CZ  | ARG | A | 266 | 0 | -10.551 | 25.334 | 13.319 | 1.00 | 47.09 |
|    | ATOM | 2078 | NH1 | ARG | A | 266 | 0 | -10.921 | 24.294 | 12.577 | 1.00 | 48.10 |
| 35 | ATOM | 2079 | NH2 | ARG | A | 266 | 0 | -11.452 | 25.828 | 14.165 | 1.00 | 47.80 |
|    | ATOM | 2080 | N   | ASN | A | 267 | 0 | -7.586  | 20.983 | 14.141 | 1.00 | 25.17 |
|    | ATOM | 2081 | CA  | ASN | A | 267 | 0 | -7.727  | 19.669 | 13.602 | 1.00 | 23.96 |
|    | ATOM | 2082 | C   | ASN | A | 267 | 0 | -6.859  | 18.625 | 14.244 | 1.00 | 22.35 |



|    |      |      |     |           |   |        |        |        |      |       |
|----|------|------|-----|-----------|---|--------|--------|--------|------|-------|
|    | ATOM | 2083 | O   | ASN A 267 | 0 | -6.306 | 17.864 | 13.448 | 1.00 | 23.57 |
|    | ATOM | 2084 | CB  | ASN A 267 | 0 | -7.390 | 19.695 | 12.098 | 1.00 | 26.46 |
|    | ATOM | 2085 | CG  | ASN A 267 | 0 | -8.461 | 20.426 | 11.309 | 1.00 | 29.21 |
|    | ATOM | 2086 | OD1 | ASN A 267 | 0 | -8.190 | 21.226 | 10.405 | 1.00 | 30.18 |
| 5  | ATOM | 2087 | ND2 | ASN A 267 | 0 | -9.681 | 20.075 | 11.701 | 1.00 | 28.77 |
|    | ATOM | 2088 | N   | GLY A 268 | 0 | -6.706 | 18.594 | 15.550 | 1.00 | 21.85 |
|    | ATOM | 2089 | CA  | GLY A 268 | 0 | -5.890 | 17.533 | 16.121 | 1.00 | 22.47 |
|    | ATOM | 2090 | C   | GLY A 268 | 0 | -4.383 | 17.760 | 16.118 | 1.00 | 23.29 |
|    | ATOM | 2091 | O   | GLY A 268 | 0 | -3.652 | 16.898 | 16.632 | 1.00 | 23.28 |
| 10 | ATOM | 2092 | N   | LEU A 269 | 0 | -3.880 | 18.901 | 15.676 | 1.00 | 22.69 |
|    | ATOM | 2093 | CA  | LEU A 269 | 0 | -2.454 | 19.222 | 15.684 | 1.00 | 22.62 |
|    | ATOM | 2094 | C   | LEU A 269 | 0 | -1.753 | 18.890 | 16.990 | 1.00 | 23.26 |
|    | ATOM | 2095 | O   | LEU A 269 | 0 | -0.650 | 18.335 | 17.035 | 1.00 | 23.42 |
|    | ATOM | 2096 | CB  | LEU A 269 | 0 | -2.311 | 20.713 | 15.472 | 1.00 | 22.28 |
| 15 | ATOM | 2097 | CG  | LEU A 269 | 0 | -1.183 | 21.414 | 14.745 | 1.00 | 23.42 |
| 20 | ATOM | 2098 | CD1 | LEU A 269 | 0 | -0.508 | 22.380 | 15.682 | 1.00 | 19.64 |
| 25 | ATOM | 2099 | CD2 | LEU A 269 | 0 | -0.213 | 20.492 | 14.009 | 1.00 | 21.26 |
| 30 | ATOM | 2100 | N   | ALA A 270 | 0 | -2.371 | 19.199 | 18.135 | 1.00 | 21.51 |
|    | ATOM | 2101 | CA  | ALA A 270 | 0 | -1.784 | 18.899 | 19.419 | 1.00 | 22.26 |
|    | ATOM | 2102 | C   | ALA A 270 | 0 | -1.612 | 17.415 | 19.680 | 1.00 | 23.22 |
|    | ATOM | 2103 | O   | ALA A 270 | 0 | -0.898 | 17.077 | 20.637 | 1.00 | 21.81 |
|    | ATOM | 2104 | CB  | ALA A 270 | 0 | -2.632 | 19.518 | 20.542 | 1.00 | 21.06 |
|    | ATOM | 2105 | N   | GLY A 271 | 0 | -2.337 | 16.521 | 18.996 | 1.00 | 23.75 |
|    | ATOM | 2106 | CA  | GLY A 271 | 0 | -2.190 | 15.125 | 19.372 | 1.00 | 24.98 |
|    | ATOM | 2107 | C   | GLY A 271 | 0 | -1.507 | 14.267 | 18.328 | 1.00 | 26.07 |
|    | ATOM | 2108 | O   | GLY A 271 | 0 | -1.501 | 13.045 | 18.523 | 1.00 | 26.26 |
|    | ATOM | 2109 | N   | THR A 272 | 0 | -0.906 | 14.825 | 17.278 | 1.00 | 26.48 |
|    | ATOM | 2110 | CA  | THR A 272 | 0 | -0.327 | 13.901 | 16.294 | 1.00 | 25.27 |
|    | ATOM | 2111 | C   | THR A 272 | 0 | 0.986  | 14.362 | 15.701 | 1.00 | 25.58 |
|    | ATOM | 2112 | O   | THR A 272 | 0 | 1.216  | 15.567 | 15.701 | 1.00 | 24.46 |
|    | ATOM | 2113 | CB  | THR A 272 | 0 | -1.380 | 13.759 | 15.164 | 1.00 | 24.40 |
|    | ATOM | 2114 | OG1 | THR A 272 | 0 | -0.931 | 12.737 | 14.275 | 1.00 | 26.32 |
|    | ATOM | 2115 | CG2 | THR A 272 | 0 | -1.575 | 15.022 | 14.347 | 1.00 | 22.50 |
|    | ATOM | 2116 | N   | PHE A 273 | 0 | 1.714  | 13.443 | 15.062 | 1.00 | 24.01 |
| 35 | ATOM | 2117 | CA  | PHE A 273 | 0 | 2.897  | 13.755 | 14.271 | 1.00 | 23.99 |
|    | ATOM | 2118 | C   | PHE A 273 | 0 | 2.663  | 13.201 | 12.858 | 1.00 | 24.84 |
|    | ATOM | 2119 | O   | PHE A 273 | 0 | 3.534  | 13.207 | 11.987 | 1.00 | 24.73 |
|    | ATOM | 2120 | CB  | PHE A 273 | 0 | 4.175  | 13.094 | 14.812 | 1.00 | 22.16 |

|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 2121 | CG  | PHE | A | 273 | 0 | 4.550  | 13.676 | 16.153 | 1.00 | 21.84 |
|    | ATOM | 2122 | CD1 | PHE | A | 273 | 0 | 4.190  | 13.037 | 17.327 | 1.00 | 20.67 |
|    | ATOM | 2123 | CD2 | PHE | A | 273 | 0 | 5.221  | 14.881 | 16.216 | 1.00 | 20.98 |
|    | ATOM | 2124 | CE1 | PHE | A | 273 | 0 | 4.538  | 13.574 | 18.554 | 1.00 | 21.75 |
| 5  | ATOM | 2125 | CE2 | PHE | A | 273 | 0 | 5.559  | 15.428 | 17.440 | 1.00 | 21.65 |
|    | ATOM | 2126 | CZ  | PHE | A | 273 | 0 | 5.216  | 14.787 | 18.616 | 1.00 | 22.38 |
|    | ATOM | 2127 | N   | ALA | A | 274 | 0 | 1.440  | 12.718 | 12.647 | 1.00 | 24.38 |
|    | ATOM | 2128 | CA  | ALA | A | 274 | 0 | 1.094  | 12.053 | 11.397 | 1.00 | 24.29 |
|    | ATOM | 2129 | C   | ALA | A | 274 | 0 | 1.399  | 12.920 | 10.194 | 1.00 | 24.15 |
| 10 | ATOM | 2130 | O   | ALA | A | 274 | 0 | 0.990  | 14.078 | 10.161 | 1.00 | 23.07 |
|    | ATOM | 2131 | CB  | ALA | A | 274 | 0 | -0.385 | 11.681 | 11.387 | 1.00 | 23.53 |
|    | ATOM | 2132 | N   | ASN | A | 275 | 0 | 2.075  | 12.355 | 9.204  | 1.00 | 23.41 |
|    | ATOM | 2133 | CA  | ASN | A | 275 | 0 | 2.389  | 13.068 | 7.987  | 1.00 | 24.88 |
|    | ATOM | 2134 | C   | ASN | A | 275 | 0 | 3.498  | 14.093 | 8.191  | 1.00 | 22.73 |
| 45 | ATOM | 2135 | O   | ASN | A | 275 | 0 | 3.708  | 14.947 | 7.337  | 1.00 | 21.57 |
|    | ATOM | 2136 | CB  | ASN | A | 275 | 0 | 1.138  | 13.806 | 7.516  | 1.00 | 30.04 |
|    | ATOM | 2137 | CG  | ASN | A | 275 | 0 | 0.194  | 13.070 | 6.633  | 1.00 | 35.28 |
|    | ATOM | 2138 | OD1 | ASN | A | 275 | 0 | -0.458 | 12.071 | 6.985  | 1.00 | 36.92 |
|    | ATOM | 2139 | ND2 | ASN | A | 275 | 0 | 0.156  | 13.655 | 5.427  | 1.00 | 37.87 |
| 20 | ATOM | 2140 | N   | GLY | A | 276 | 0 | 4.185  | 14.083 | 9.322  | 1.00 | 22.10 |
|    | ATOM | 2141 | CA  | GLY | A | 276 | 0 | 5.278  | 15.025 | 9.503  | 1.00 | 20.95 |
|    | ATOM | 2142 | C   | GLY | A | 276 | 0 | 4.801  | 16.392 | 9.962  | 1.00 | 19.61 |
|    | ATOM | 2143 | O   | GLY | A | 276 | 0 | 5.587  | 17.325 | 9.816  | 1.00 | 19.96 |
|    | ATOM | 2144 | N   | VAL | A | 277 | 0 | 3.600  | 16.504 | 10.540 | 1.00 | 16.82 |
| 25 | ATOM | 2145 | CA  | VAL | A | 277 | 0 | 3.207  | 17.796 | 11.107 | 1.00 | 15.06 |
|    | ATOM | 2146 | C   | VAL | A | 277 | 0 | 4.033  | 17.942 | 12.379 | 1.00 | 13.80 |
|    | ATOM | 2147 | O   | VAL | A | 277 | 0 | 4.454  | 16.912 | 12.926 | 1.00 | 13.80 |
|    | ATOM | 2148 | CB  | VAL | A | 277 | 0 | 1.676  | 17.849 | 11.397 | 1.00 | 14.37 |
|    | ATOM | 2149 | CG1 | VAL | A | 277 | 0 | 0.882  | 17.824 | 10.099 | 1.00 | 13.37 |
| 30 | ATOM | 2150 | CG2 | VAL | A | 277 | 0 | 1.213  | 16.763 | 12.330 | 1.00 | 11.77 |
|    | ATOM | 2151 | N   | ASN | A | 278 | 0 | 4.307  | 19.100 | 12.936 | 1.00 | 14.25 |
|    | ATOM | 2152 | CA  | ASN | A | 278 | 0 | 5.026  | 19.262 | 14.209 | 1.00 | 13.80 |
|    | ATOM | 2153 | C   | ASN | A | 278 | 0 | 6.443  | 18.640 | 14.208 | 1.00 | 13.80 |
|    | ATOM | 2154 | O   | ASN | A | 278 | 0 | 7.020  | 18.228 | 15.229 | 1.00 | 11.81 |
| 35 | ATOM | 2155 | CB  | ASN | A | 278 | 0 | 4.216  | 18.607 | 15.312 | 1.00 | 14.24 |
|    | ATOM | 2156 | CG  | ASN | A | 278 | 0 | 2.890  | 19.288 | 15.659 | 1.00 | 15.35 |
|    | ATOM | 2157 | OD1 | ASN | A | 278 | 0 | 1.952  | 18.531 | 16.009 | 1.00 | 14.81 |
|    | ATOM | 2158 | ND2 | ASN | A | 278 | 0 | 2.821  | 20.591 | 15.593 | 1.00 | 10.69 |

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|    |      |      |     |           |   |        |        |        |      |       |
|----|------|------|-----|-----------|---|--------|--------|--------|------|-------|
|    | ATOM | 2159 | N   | SER A 279 | 0 | 7.044  | 18.595 | 13.025 | 1.00 | 12.68 |
|    | ATOM | 2160 | CA  | SER A 279 | 0 | 8.296  | 17.892 | 12.860 | 1.00 | 15.48 |
|    | ATOM | 2161 | C   | SER A 279 | 0 | 9.323  | 18.571 | 11.964 | 1.00 | 15.07 |
|    | ATOM | 2162 | O   | SER A 279 | 0 | 8.995  | 19.309 | 11.044 | 1.00 | 12.20 |
| 5  | ATOM | 2163 | CB  | SER A 279 | 0 | 7.976  | 16.549 | 12.122 | 1.00 | 14.76 |
|    | ATOM | 2164 | OG  | SER A 279 | 0 | 7.268  | 15.722 | 13.054 | 1.00 | 19.57 |
|    | ATOM | 2165 | N   | ALA A 280 | 0 | 10.570 | 18.152 | 12.229 | 1.00 | 15.67 |
|    | ATOM | 2166 | CA  | ALA A 280 | 0 | 11.664 | 18.548 | 11.327 | 1.00 | 16.75 |
|    | ATOM | 2167 | C   | ALA A 280 | 0 | 12.620 | 17.341 | 11.287 | 1.00 | 15.83 |
| 10 | ATOM | 2168 | O   | ALA A 280 | 0 | 12.438 | 16.346 | 11.997 | 1.00 | 15.55 |
|    | ATOM | 2169 | CB  | ALA A 280 | 0 | 12.363 | 19.828 | 11.745 | 1.00 | 16.40 |
|    | ATOM | 2170 | N   | ILE A 281 | 0 | 13.669 | 17.478 | 10.485 | 1.00 | 14.79 |
|    | ATOM | 2171 | CA  | ILE A 281 | 0 | 14.569 | 16.346 | 10.257 | 1.00 | 15.55 |
|    | ATOM | 2172 | C   | ILE A 281 | 0 | 16.002 | 16.610 | 10.699 | 1.00 | 15.92 |
|    | ATOM | 2173 | O   | ILE A 281 | 0 | 16.649 | 17.577 | 10.284 | 1.00 | 14.96 |
|    | ATOM | 2174 | CB  | ILE A 281 | 0 | 14.557 | 16.013 | 8.735  | 1.00 | 16.44 |
|    | ATOM | 2175 | CG1 | ILE A 281 | 0 | 13.147 | 15.573 | 8.275  | 1.00 | 16.42 |
|    | ATOM | 2176 | CG2 | ILE A 281 | 0 | 15.615 | 14.959 | 8.421  | 1.00 | 15.71 |
|    | ATOM | 2177 | CD1 | ILE A 281 | 0 | 12.981 | 15.376 | 6.771  | 1.00 | 14.22 |
|    | ATOM | 2178 | N   | LEU A 282 | 0 | 16.505 | 15.698 | 11.515 | 1.00 | 16.76 |
|    | ATOM | 2179 | CA  | LEU A 282 | 0 | 17.920 | 15.736 | 11.912 | 1.00 | 15.82 |
|    | ATOM | 2180 | C   | LEU A 282 | 0 | 18.655 | 14.747 | 10.990 | 1.00 | 16.16 |
|    | ATOM | 2181 | O   | LEU A 282 | 0 | 18.409 | 13.530 | 11.034 | 1.00 | 16.41 |
|    | ATOM | 2182 | CB  | LEU A 282 | 0 | 18.129 | 15.400 | 13.379 | 1.00 | 14.54 |
|    | ATOM | 2183 | CG  | LEU A 282 | 0 | 19.632 | 15.346 | 13.773 | 1.00 | 16.00 |
|    | ATOM | 2184 | CD1 | LEU A 282 | 0 | 20.100 | 16.767 | 14.052 | 1.00 | 16.10 |
|    | ATOM | 2185 | CD2 | LEU A 282 | 0 | 19.865 | 14.469 | 14.970 | 1.00 | 13.21 |
|    | ATOM | 2186 | N   | ARG A 283 | 0 | 19.490 | 15.254 | 10.100 | 1.00 | 15.20 |
|    | ATOM | 2187 | CA  | ARG A 283 | 0 | 20.160 | 14.377 | 9.141  | 1.00 | 16.98 |
| 30 | ATOM | 2188 | C   | ARG A 283 | 0 | 21.683 | 14.326 | 9.279  | 1.00 | 17.31 |
|    | ATOM | 2189 | O   | ARG A 283 | 0 | 22.398 | 15.330 | 9.203  | 1.00 | 17.82 |
|    | ATOM | 2190 | CB  | ARG A 283 | 0 | 19.844 | 14.861 | 7.736  | 1.00 | 17.30 |
|    | ATOM | 2191 | CG  | ARG A 283 | 0 | 20.417 | 13.978 | 6.641  | 1.00 | 19.94 |
|    | ATOM | 2192 | CD  | ARG A 283 | 0 | 19.860 | 14.446 | 5.301  | 1.00 | 20.04 |
| 35 | ATOM | 2193 | NE  | ARG A 283 | 0 | 18.474 | 14.010 | 5.208  | 1.00 | 21.56 |
|    | ATOM | 2194 | CZ  | ARG A 283 | 0 | 17.479 | 14.530 | 4.505  | 1.00 | 21.81 |
|    | ATOM | 2195 | NH1 | ARG A 283 | 0 | 16.287 | 13.922 | 4.564  | 1.00 | 21.52 |
|    | ATOM | 2196 | NH2 | ARG A 283 | 0 | 17.653 | 15.634 | 3.797  | 1.00 | 21.84 |

|    |      |      |     |           |   |        |        |        |      |       |
|----|------|------|-----|-----------|---|--------|--------|--------|------|-------|
|    | ATOM | 2197 | N   | TYR A 284 | 0 | 22.163 | 13.136 | 9.567  | 1.00 | 16.79 |
|    | ATOM | 2198 | CA  | TYR A 284 | 0 | 23.581 | 12.821 | 9.620  | 1.00 | 16.35 |
|    | ATOM | 2199 | C   | TYR A 284 | 0 | 24.155 | 12.787 | 8.198  | 1.00 | 16.52 |
|    | ATOM | 2200 | O   | TYR A 284 | 0 | 23.556 | 12.226 | 7.271  | 1.00 | 16.33 |
| 5  | ATOM | 2201 | CB  | TYR A 284 | 0 | 23.730 | 11.444 | 10.252 | 1.00 | 16.51 |
|    | ATOM | 2202 | CG  | TYR A 284 | 0 | 23.727 | 11.460 | 11.755 | 1.00 | 17.09 |
|    | ATOM | 2203 | CD1 | TYR A 284 | 0 | 24.910 | 11.178 | 12.437 | 1.00 | 17.37 |
|    | ATOM | 2204 | CD2 | TYR A 284 | 0 | 22.601 | 11.753 | 12.504 | 1.00 | 17.15 |
|    | ATOM | 2205 | CE1 | TYR A 284 | 0 | 24.937 | 11.163 | 13.817 | 1.00 | 17.64 |
| 10 | ATOM | 2206 | CE2 | TYR A 284 | 0 | 22.623 | 11.770 | 13.892 | 1.00 | 15.66 |
|    | ATOM | 2207 | CZ  | TYR A 284 | 0 | 23.796 | 11.476 | 14.542 | 1.00 | 15.99 |
|    | ATOM | 2208 | OH  | TYR A 284 | 0 | 23.873 | 11.448 | 15.919 | 1.00 | 14.03 |
|    | ATOM | 2209 | N   | ALA A 285 | 0 | 25.276 | 13.463 | 7.992  | 1.00 | 17.42 |
|    | ATOM | 2210 | CA  | ALA A 285 | 0 | 25.950 | 13.461 | 6.692  | 1.00 | 19.35 |
| 15 | ATOM | 2211 | C   | ALA A 285 | 0 | 26.186 | 11.994 | 6.328  | 1.00 | 19.20 |
| 15 | ATOM | 2212 | O   | ALA A 285 | 0 | 26.692 | 11.237 | 7.146  | 1.00 | 17.18 |
| 15 | ATOM | 2213 | CB  | ALA A 285 | 0 | 27.293 | 14.194 | 6.770  | 1.00 | 19.86 |
| 15 | ATOM | 2214 | N   | GLY A 286 | 0 | 25.724 | 11.614 | 5.153  | 1.00 | 20.01 |
| 15 | ATOM | 2215 | CA  | GLY A 286 | 0 | 25.851 | 10.224 | 4.747  | 1.00 | 21.88 |
| 20 | ATOM | 2216 | C   | GLY A 286 | 0 | 24.507 | 9.510  | 4.754  | 1.00 | 22.87 |
| 20 | ATOM | 2217 | O   | GLY A 286 | 0 | 24.406 | 8.418  | 4.197  | 1.00 | 23.06 |
| 20 | ATOM | 2218 | N   | ALA A 287 | 0 | 23.504 | 10.076 | 5.423  | 1.00 | 22.81 |
| 20 | ATOM | 2219 | CA  | ALA A 287 | 0 | 22.176 | 9.449  | 5.364  | 1.00 | 21.50 |
| 25 | ATOM | 2220 | C   | ALA A 287 | 0 | 21.482 | 9.880  | 4.079  | 1.00 | 20.58 |
| 25 | ATOM | 2221 | O   | ALA A 287 | 0 | 21.647 | 11.032 | 3.629  | 1.00 | 19.44 |
| 25 | ATOM | 2222 | CB  | ALA A 287 | 0 | 21.340 | 9.890  | 6.562  | 1.00 | 21.34 |
|    | ATOM | 2223 | N   | ALA A 288 | 0 | 20.632 | 9.041  | 3.523  | 1.00 | 21.20 |
|    | ATOM | 2224 | CA  | ALA A 288 | 0 | 19.899 | 9.450  | 2.310  | 1.00 | 23.46 |
|    | ATOM | 2225 | C   | ALA A 288 | 0 | 18.965 | 10.629 | 2.513  | 1.00 | 24.70 |
| 30 | ATOM | 2226 | O   | ALA A 288 | 0 | 18.494 | 10.929 | 3.621  | 1.00 | 25.30 |
|    | ATOM | 2227 | CB  | ALA A 288 | 0 | 19.012 | 8.298  | 1.827  | 1.00 | 24.84 |
|    | ATOM | 2228 | N   | ASN A 289 | 0 | 18.638 | 11.300 | 1.411  | 1.00 | 25.98 |
|    | ATOM | 2229 | CA  | ASN A 289 | 0 | 17.674 | 12.398 | 1.439  | 1.00 | 27.16 |
|    | ATOM | 2230 | C   | ASN A 289 | 0 | 16.303 | 11.707 | 1.505  | 1.00 | 27.36 |
| 35 | ATOM | 2231 | O   | ASN A 289 | 0 | 15.761 | 11.330 | 0.477  | 1.00 | 27.56 |
|    | ATOM | 2232 | CB  | ASN A 289 | 0 | 17.784 | 13.250 | 0.189  | 1.00 | 29.01 |
|    | ATOM | 2233 | CG  | ASN A 289 | 0 | 18.808 | 14.364 | 0.299  | 1.00 | 30.44 |
|    | ATOM | 2234 | OD1 | ASN A 289 | 0 | 20.005 | 14.168 | 0.545  | 1.00 | 30.40 |

|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 2235 | ND2 | ASN | A | 289 | 0 | 18.340 | 15.591 | 0.121  | 1.00 | 31.98 |
|    | ATOM | 2236 | N   | ALA | A | 290 | 0 | 15.837 | 11.426 | 2.703  | 1.00 | 25.22 |
|    | ATOM | 2237 | CA  | ALA | A | 290 | 0 | 14.600 | 10.727 | 2.955  | 1.00 | 25.09 |
|    | ATOM | 2238 | C   | ALA | A | 290 | 0 | 14.087 | 11.057 | 4.363  | 1.00 | 22.98 |
| 5  | ATOM | 2239 | O   | ALA | A | 290 | 0 | 14.830 | 11.555 | 5.205  | 1.00 | 22.02 |
|    | ATOM | 2240 | CB  | ALA | A | 290 | 0 | 14.764 | 9.210  | 2.823  | 1.00 | 24.89 |
|    | ATOM | 2241 | N   | ASP | A | 291 | 0 | 12.822 | 10.718 | 4.597  | 1.00 | 21.88 |
|    | ATOM | 2242 | CA  | ASP | A | 291 | 0 | 12.223 | 10.985 | 5.907  | 1.00 | 21.71 |
|    | ATOM | 2243 | C   | ASP | A | 291 | 0 | 12.724 | 9.965  | 6.916  | 1.00 | 18.93 |
| 10 | ATOM | 2244 | O   | ASP | A | 291 | 0 | 12.911 | 8.814  | 6.596  | 1.00 | 19.66 |
|    | ATOM | 2245 | CB  | ASP | A | 291 | 0 | 10.695 | 10.862 | 5.834  | 1.00 | 22.63 |
|    | ATOM | 2246 | CG  | ASP | A | 291 | 0 | 10.088 | 12.005 | 5.076  | 1.00 | 25.41 |
|    | ATOM | 2247 | OD1 | ASP | A | 291 | 0 | 10.781 | 12.988 | 4.735  | 1.00 | 27.11 |
|    | ATOM | 2248 | OD2 | ASP | A | 291 | 0 | 8.885  | 11.932 | 4.812  | 1.00 | 27.47 |
| 15 | ATOM | 2249 | N   | PRO | A | 292 | 0 | 12.863 | 10.362 | 8.164  | 1.00 | 16.14 |
|    | ATOM | 2250 | CA  | PRO | A | 292 | 0 | 13.229 | 9.473  | 9.230  | 1.00 | 15.27 |
|    | ATOM | 2251 | C   | PRO | A | 292 | 0 | 12.087 | 8.484  | 9.389  | 1.00 | 19.40 |
|    | ATOM | 2252 | O   | PRO | A | 292 | 0 | 10.925 | 8.785  | 9.063  | 1.00 | 20.36 |
|    | ATOM | 2253 | CB  | PRO | A | 292 | 0 | 13.257 | 10.335 | 10.511 | 1.00 | 14.68 |
| 20 | ATOM | 2254 | CG  | PRO | A | 292 | 0 | 13.291 | 11.739 | 9.941  | 1.00 | 14.39 |
|    | ATOM | 2255 | CD  | PRO | A | 292 | 0 | 12.606 | 11.735 | 8.593  | 1.00 | 14.02 |
|    | ATOM | 2256 | N   | THR | A | 293 | 0 | 12.357 | 7.361  | 10.024 | 1.00 | 19.91 |
|    | ATOM | 2257 | CA  | THR | A | 293 | 0 | 11.360 | 6.379  | 10.373 | 1.00 | 20.62 |
|    | ATOM | 2258 | C   | THR | A | 293 | 0 | 11.589 | 6.055  | 11.847 | 1.00 | 20.83 |
|    | ATOM | 2259 | O   | THR | A | 293 | 0 | 11.323 | 4.943  | 12.287 | 1.00 | 23.91 |
|    | ATOM | 2260 | CB  | THR | A | 293 | 0 | 11.556 | 5.088  | 9.557  | 1.00 | 23.41 |
|    | ATOM | 2261 | OG1 | THR | A | 293 | 0 | 12.874 | 4.577  | 9.836  | 1.00 | 24.50 |
|    | ATOM | 2262 | CG2 | THR | A | 293 | 0 | 11.438 | 5.341  | 8.058  | 1.00 | 23.72 |
|    | ATOM | 2263 | N   | THR | A | 294 | 0 | 12.172 | 6.958  | 12.624 | 1.00 | 19.30 |
| 30 | ATOM | 2264 | CA  | THR | A | 294 | 0 | 12.440 | 6.634  | 14.017 | 1.00 | 19.42 |
|    | ATOM | 2265 | C   | THR | A | 294 | 0 | 11.214 | 6.896  | 14.878 | 1.00 | 20.66 |
|    | ATOM | 2266 | O   | THR | A | 294 | 0 | 10.240 | 7.485  | 14.411 | 1.00 | 19.89 |
|    | ATOM | 2267 | CB  | THR | A | 294 | 0 | 13.565 | 7.548  | 14.553 | 1.00 | 19.28 |
|    | ATOM | 2268 | OG1 | THR | A | 294 | 0 | 13.174 | 8.889  | 14.251 | 1.00 | 17.55 |
| 35 | ATOM | 2269 | CG2 | THR | A | 294 | 0 | 14.860 | 7.214  | 13.822 | 1.00 | 19.27 |
|    | ATOM | 2270 | N   | SER | A | 295 | 0 | 11.359 | 6.576  | 16.159 | 1.00 | 23.85 |
|    | ATOM | 2271 | CA  | SER | A | 295 | 0 | 10.274 | 6.851  | 17.095 | 1.00 | 27.18 |
|    | ATOM | 2272 | C   | SER | A | 295 | 0 | 10.781 | 7.484  | 18.375 | 1.00 | 27.92 |

|    |      |      |     |           |   |        |        |        |      |       |
|----|------|------|-----|-----------|---|--------|--------|--------|------|-------|
|    | ATOM | 2273 | O   | SER A 295 | 0 | 11.900 | 7.292  | 18.844 | 1.00 | 27.09 |
|    | ATOM | 2274 | CB  | SER A 295 | 0 | 9.513  | 5.546  | 17.367 | 1.00 | 28.92 |
|    | ATOM | 2275 | OG  | SER A 295 | 0 | 10.389 | 4.761  | 18.160 | 1.00 | 33.04 |
|    | ATOM | 2276 | N   | ALA A 296 | 0 | 9.930  | 8.331  | 18.965 | 1.00 | 30.04 |
| 5  | ATOM | 2277 | CA  | ALA A 296 | 0 | 10.295 | 9.003  | 20.207 | 1.00 | 29.82 |
|    | ATOM | 2278 | C   | ALA A 296 | 0 | 10.552 | 8.011  | 21.327 | 1.00 | 30.83 |
|    | ATOM | 2279 | O   | ALA A 296 | 0 | 10.114 | 6.861  | 21.328 | 1.00 | 30.67 |
|    | ATOM | 2280 | CB  | ALA A 296 | 0 | 9.187  | 9.968  | 20.599 | 1.00 | 30.16 |
|    | ATOM | 2281 | N   | ASN A 297 | 0 | 11.286 | 8.489  | 22.328 | 1.00 | 31.65 |
| 10 | ATOM | 2282 | CA  | ASN A 297 | 0 | 11.543 | 7.750  | 23.549 | 1.00 | 32.16 |
|    | ATOM | 2283 | C   | ASN A 297 | 0 | 10.200 | 7.650  | 24.285 | 1.00 | 32.80 |
|    | ATOM | 2284 | O   | ASN A 297 | 0 | 9.492  | 8.616  | 24.565 | 1.00 | 31.30 |
|    | ATOM | 2285 | CB  | ASN A 297 | 0 | 12.522 | 8.497  | 24.443 | 1.00 | 33.07 |
|    | ATOM | 2286 | CG  | ASN A 297 | 0 | 12.869 | 7.742  | 25.706 | 1.00 | 35.21 |
| 15 | ATOM | 2287 | OD1 | ASN A 297 | 0 | 12.116 | 6.965  | 26.284 | 1.00 | 35.45 |
| 16 | ATOM | 2288 | ND2 | ASN A 297 | 0 | 14.106 | 7.982  | 26.162 | 1.00 | 37.10 |
| 17 | ATOM | 2289 | N   | PRO A 298 | 0 | 9.865  | 6.430  | 24.647 | 1.00 | 33.40 |
| 18 | ATOM | 2290 | CA  | PRO A 298 | 0 | 8.626  | 6.116  | 25.331 | 1.00 | 33.89 |
| 19 | ATOM | 2291 | C   | PRO A 298 | 0 | 8.580  | 6.690  | 26.732 | 1.00 | 32.60 |
| 20 | ATOM | 2292 | O   | PRO A 298 | 0 | 7.522  | 7.155  | 27.173 | 1.00 | 32.72 |
| 21 | ATOM | 2293 | CB  | PRO A 298 | 0 | 8.505  | 4.576  | 25.358 | 1.00 | 35.13 |
| 22 | ATOM | 2294 | CG  | PRO A 298 | 0 | 9.932  | 4.147  | 25.128 | 1.00 | 34.52 |
| 23 | ATOM | 2295 | CD  | PRO A 298 | 0 | 10.630 | 5.222  | 24.323 | 1.00 | 34.10 |
| 24 | ATOM | 2296 | N   | ASN A 299 | 0 | 9.689  | 6.721  | 27.461 | 1.00 | 29.60 |
| 25 | ATOM | 2297 | CA  | ASN A 299 | 0 | 9.701  | 7.229  | 28.834 | 1.00 | 28.47 |
| 26 | ATOM | 2298 | C   | ASN A 299 | 0 | 10.818 | 8.251  | 29.006 | 1.00 | 27.18 |
| 27 | ATOM | 2299 | O   | ASN A 299 | 0 | 11.906 | 7.967  | 29.528 | 1.00 | 25.69 |
| 28 | ATOM | 2300 | CB  | ASN A 299 | 0 | 9.964  | 6.017  | 29.747 | 1.00 | 29.50 |
| 29 | ATOM | 2301 | CG  | ASN A 299 | 0 | 8.907  | 4.935  | 29.673 | 1.00 | 32.34 |
| 30 | ATOM | 2302 | OD1 | ASN A 299 | 0 | 9.090  | 3.873  | 29.075 | 1.00 | 33.50 |
|    | ATOM | 2303 | ND2 | ASN A 299 | 0 | 7.735  | 5.182  | 30.251 | 1.00 | 33.04 |
|    | ATOM | 2304 | N   | PRO A 300 | 0 | 10.629 | 9.450  | 28.498 | 1.00 | 26.02 |
|    | ATOM | 2305 | CA  | PRO A 300 | 0 | 11.668 | 10.486 | 28.498 | 1.00 | 23.99 |
|    | ATOM | 2306 | C   | PRO A 300 | 0 | 11.987 | 11.054 | 29.860 | 1.00 | 21.16 |
| 35 | ATOM | 2307 | O   | PRO A 300 | 0 | 11.051 | 11.174 | 30.649 | 1.00 | 20.81 |
|    | ATOM | 2308 | CB  | PRO A 300 | 0 | 11.137 | 11.623 | 27.594 | 1.00 | 23.33 |
|    | ATOM | 2309 | CG  | PRO A 300 | 0 | 9.645  | 11.422 | 27.729 | 1.00 | 24.68 |
|    | ATOM | 2310 | CD  | PRO A 300 | 0 | 9.387  | 9.918  | 27.882 | 1.00 | 25.22 |

|    |      |      |     |           |   |        |        |        |      |       |
|----|------|------|-----|-----------|---|--------|--------|--------|------|-------|
|    | ATOM | 2311 | N   | ALA A 301 | 0 | 13.242 | 11.361 | 30.179 | 1.00 | 19.17 |
|    | ATOM | 2312 | CA  | ALA A 301 | 0 | 13.538 | 12.139 | 31.410 | 1.00 | 17.57 |
|    | ATOM | 2313 | C   | ALA A 301 | 0 | 13.159 | 13.588 | 31.084 | 1.00 | 16.53 |
|    | ATOM | 2314 | O   | ALA A 301 | 0 | 13.613 | 14.235 | 30.131 | 1.00 | 16.24 |
| 5  | ATOM | 2315 | CB  | ALA A 301 | 0 | 15.006 | 11.982 | 31.774 | 1.00 | 17.17 |
|    | ATOM | 2316 | N   | GLN A 302 | 0 | 12.139 | 14.131 | 31.723 | 1.00 | 18.15 |
|    | ATOM | 2317 | CA  | GLN A 302 | 0 | 11.580 | 15.446 | 31.441 | 1.00 | 19.34 |
|    | ATOM | 2318 | C   | GLN A 302 | 0 | 12.335 | 16.580 | 32.124 | 1.00 | 19.16 |
|    | ATOM | 2319 | O   | GLN A 302 | 0 | 12.577 | 16.444 | 33.324 | 1.00 | 19.07 |
| 10 | ATOM | 2320 | CB  | GLN A 302 | 0 | 10.122 | 15.483 | 31.937 | 1.00 | 19.10 |
|    | ATOM | 2321 | CG  | GLN A 302 | 0 | 9.304  | 16.666 | 31.478 | 1.00 | 20.55 |
|    | ATOM | 2322 | CD  | GLN A 302 | 0 | 8.960  | 16.738 | 30.009 | 1.00 | 20.18 |
|    | ATOM | 2323 | OE1 | GLN A 302 | 0 | 8.843  | 15.721 | 29.331 | 1.00 | 22.29 |
|    | ATOM | 2324 | NE2 | GLN A 302 | 0 | 8.813  | 17.936 | 29.436 | 1.00 | 18.46 |
| 15 | ATOM | 2325 | N   | LEU A 303 | 0 | 12.629 | 17.681 | 31.444 | 1.00 | 17.92 |
|    | ATOM | 2326 | CA  | LEU A 303 | 0 | 13.241 | 18.824 | 32.139 | 1.00 | 17.32 |
|    | ATOM | 2327 | C   | LEU A 303 | 0 | 12.316 | 19.357 | 33.232 | 1.00 | 17.65 |
|    | ATOM | 2328 | O   | LEU A 303 | 0 | 11.140 | 19.664 | 33.021 | 1.00 | 17.55 |
|    | ATOM | 2329 | CB  | LEU A 303 | 0 | 13.489 | 19.988 | 31.168 | 1.00 | 15.14 |
| 20 | ATOM | 2330 | CG  | LEU A 303 | 0 | 13.919 | 21.317 | 31.797 | 1.00 | 16.94 |
|    | ATOM | 2331 | CD1 | LEU A 303 | 0 | 15.262 | 21.146 | 32.504 | 1.00 | 17.30 |
|    | ATOM | 2332 | CD2 | LEU A 303 | 0 | 13.988 | 22.432 | 30.764 | 1.00 | 12.82 |
|    | ATOM | 2333 | N   | ASN A 304 | 0 | 12.868 | 19.580 | 34.399 | 1.00 | 17.34 |
|    | ATOM | 2334 | CA  | ASN A 304 | 0 | 12.199 | 20.212 | 35.531 | 1.00 | 19.12 |
| 25 | ATOM | 2335 | C   | ASN A 304 | 0 | 13.071 | 21.435 | 35.833 | 1.00 | 19.06 |
|    | ATOM | 2336 | O   | ASN A 304 | 0 | 14.265 | 21.349 | 36.122 | 1.00 | 20.37 |
|    | ATOM | 2337 | CB  | ASN A 304 | 0 | 12.073 | 19.244 | 36.704 | 1.00 | 22.16 |
|    | ATOM | 2338 | CG  | ASN A 304 | 0 | 11.748 | 19.900 | 38.024 | 1.00 | 25.02 |
|    | ATOM | 2339 | OD1 | ASN A 304 | 0 | 11.506 | 21.111 | 38.146 | 1.00 | 26.72 |
| 30 | ATOM | 2340 | ND2 | ASN A 304 | 0 | 11.766 | 19.133 | 39.114 | 1.00 | 25.99 |
|    | ATOM | 2341 | N   | GLU A 305 | 0 | 12.541 | 22.629 | 35.662 | 1.00 | 17.64 |
|    | ATOM | 2342 | CA  | GLU A 305 | 0 | 13.204 | 23.890 | 35.840 | 1.00 | 16.64 |
|    | ATOM | 2343 | C   | GLU A 305 | 0 | 13.884 | 23.977 | 37.194 | 1.00 | 16.06 |
|    | ATOM | 2344 | O   | GLU A 305 | 0 | 14.965 | 24.564 | 37.208 | 1.00 | 14.78 |
| 35 | ATOM | 2345 | CB  | GLU A 305 | 0 | 12.286 | 25.085 | 35.567 | 1.00 | 15.91 |
|    | ATOM | 2346 | CG  | GLU A 305 | 0 | 12.898 | 26.484 | 35.831 | 1.00 | 14.81 |
|    | ATOM | 2347 | CD  | GLU A 305 | 0 | 11.794 | 27.546 | 35.666 | 1.00 | 15.72 |
|    | ATOM | 2348 | OE1 | GLU A 305 | 0 | 11.584 | 28.026 | 34.527 | 1.00 | 14.63 |

|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 2349 | OE2 | GLU | A | 305 | 0 | 11.154 | 27.861 | 36.685 | 1.00 | 13.05 |
|    | ATOM | 2350 | N   | ALA | A | 306 | 0 | 13.416 | 23.432 | 38.298 | 1.00 | 15.83 |
|    | ATOM | 2351 | CA  | ALA | A | 306 | 0 | 14.131 | 23.509 | 39.565 | 1.00 | 17.92 |
|    | ATOM | 2352 | C   | ALA | A | 306 | 0 | 15.437 | 22.682 | 39.532 | 1.00 | 18.62 |
| 5  | ATOM | 2353 | O   | ALA | A | 306 | 0 | 16.213 | 22.867 | 40.464 | 1.00 | 18.37 |
|    | ATOM | 2354 | CB  | ALA | A | 306 | 0 | 13.283 | 22.993 | 40.711 | 1.00 | 16.23 |
|    | ATOM | 2355 | N   | ASP | A | 307 | 0 | 15.721 | 21.860 | 38.523 | 1.00 | 18.04 |
|    | ATOM | 2356 | CA  | ASP | A | 307 | 0 | 16.988 | 21.164 | 38.409 | 1.00 | 18.68 |
|    | ATOM | 2357 | C   | ASP | A | 307 | 0 | 18.035 | 22.039 | 37.707 | 1.00 | 19.89 |
| 10 | ATOM | 2358 | O   | ASP | A | 307 | 0 | 19.239 | 21.695 | 37.739 | 1.00 | 20.36 |
|    | ATOM | 2359 | CB  | ASP | A | 307 | 0 | 16.904 | 19.863 | 37.592 | 1.00 | 17.64 |
|    | ATOM | 2360 | CG  | ASP | A | 307 | 0 | 15.980 | 18.873 | 38.290 | 1.00 | 18.17 |
|    | ATOM | 2361 | OD1 | ASP | A | 307 | 0 | 15.918 | 18.919 | 39.535 | 1.00 | 18.27 |
|    | ATOM | 2362 | OD2 | ASP | A | 307 | 0 | 15.311 | 18.094 | 37.592 | 1.00 | 17.32 |
| 15 | ATOM | 2363 | N   | LEU | A | 308 | 0 | 17.583 | 23.110 | 37.052 | 1.00 | 16.43 |
| 16 | ATOM | 2364 | CA  | LEU | A | 308 | 0 | 18.581 | 23.962 | 36.377 | 1.00 | 16.80 |
| 17 | ATOM | 2365 | C   | LEU | A | 308 | 0 | 19.327 | 24.827 | 37.384 | 1.00 | 16.94 |
| 18 | ATOM | 2366 | O   | LEU | A | 308 | 0 | 18.784 | 25.320 | 38.380 | 1.00 | 17.28 |
| 19 | ATOM | 2367 | CB  | LEU | A | 308 | 0 | 17.925 | 24.775 | 35.257 | 1.00 | 12.52 |
| 20 | ATOM | 2368 | CG  | LEU | A | 308 | 0 | 17.436 | 23.936 | 34.073 | 1.00 | 12.15 |
| 21 | ATOM | 2369 | CD1 | LEU | A | 308 | 0 | 16.692 | 24.834 | 33.101 | 1.00 | 11.67 |
| 22 | ATOM | 2370 | CD2 | LEU | A | 308 | 0 | 18.547 | 23.186 | 33.341 | 1.00 | 12.23 |
| 23 | ATOM | 2371 | N   | HIS | A | 309 | 0 | 20.640 | 24.968 | 37.243 | 1.00 | 18.01 |
| 24 | ATOM | 2372 | CA  | HIS | A | 309 | 0 | 21.430 | 25.802 | 38.158 | 1.00 | 18.47 |
| 25 | ATOM | 2373 | C   | HIS | A | 309 | 0 | 22.328 | 26.770 | 37.394 | 1.00 | 17.36 |
| 26 | ATOM | 2374 | O   | HIS | A | 309 | 0 | 23.015 | 26.378 | 36.459 | 1.00 | 17.82 |
| 27 | ATOM | 2375 | CB  | HIS | A | 309 | 0 | 22.267 | 24.997 | 39.140 | 1.00 | 18.51 |
| 28 | ATOM | 2376 | CG  | HIS | A | 309 | 0 | 21.470 | 24.052 | 39.965 | 1.00 | 20.71 |
| 29 | ATOM | 2377 | ND1 | HIS | A | 309 | 0 | 21.526 | 22.684 | 39.790 | 1.00 | 21.77 |
| 30 | ATOM | 2378 | CD2 | HIS | A | 309 | 0 | 20.578 | 24.285 | 40.956 | 1.00 | 22.07 |
| 31 | ATOM | 2379 | CE1 | HIS | A | 309 | 0 | 20.701 | 22.115 | 40.657 | 1.00 | 22.85 |
| 32 | ATOM | 2380 | NE2 | HIS | A | 309 | 0 | 20.120 | 23.059 | 41.377 | 1.00 | 22.67 |
| 33 | ATOM | 2381 | N   | ALA | A | 310 | 0 | 22.352 | 28.005 | 37.837 | 1.00 | 17.27 |
| 34 | ATOM | 2382 | CA  | ALA | A | 310 | 0 | 23.173 | 29.068 | 37.228 | 1.00 | 17.74 |
| 35 | ATOM | 2383 | C   | ALA | A | 310 | 0 | 24.663 | 28.775 | 37.342 | 1.00 | 18.13 |
| 36 | ATOM | 2384 | O   | ALA | A | 310 | 0 | 25.103 | 28.233 | 38.369 | 1.00 | 19.61 |
| 37 | ATOM | 2385 | CB  | ALA | A | 310 | 0 | 22.869 | 30.356 | 37.985 | 1.00 | 16.92 |
| 38 | ATOM | 2386 | N   | LEU | A | 311 | 0 | 25.427 | 29.021 | 36.304 | 1.00 | 19.30 |



|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 2387 | CA  | LEU | A | 311 | 0 | 26.856 | 28.762 | 36.277 | 1.00 | 20.71 |
|    | ATOM | 2388 | C   | LEU | A | 311 | 0 | 27.655 | 29.922 | 36.881 | 1.00 | 22.67 |
|    | ATOM | 2389 | O   | LEU | A | 311 | 0 | 28.581 | 29.788 | 37.682 | 1.00 | 23.06 |
|    | ATOM | 2390 | CB  | LEU | A | 311 | 0 | 27.305 | 28.591 | 34.817 | 1.00 | 20.57 |
| 5  | ATOM | 2391 | CG  | LEU | A | 311 | 0 | 28.796 | 28.196 | 34.684 | 1.00 | 21.52 |
|    | ATOM | 2392 | CD1 | LEU | A | 311 | 0 | 28.993 | 26.783 | 35.229 | 1.00 | 20.80 |
|    | ATOM | 2393 | CD2 | LEU | A | 311 | 0 | 29.319 | 28.282 | 33.254 | 1.00 | 20.17 |
|    | ATOM | 2394 | N   | ILE | A | 312 | 0 | 27.333 | 31.142 | 36.449 | 1.00 | 23.42 |
|    | ATOM | 2395 | CA  | ILE | A | 312 | 0 | 28.092 | 32.311 | 36.899 | 1.00 | 24.86 |
| 10 | ATOM | 2396 | C   | ILE | A | 312 | 0 | 27.337 | 33.157 | 37.914 | 1.00 | 26.54 |
|    | ATOM | 2397 | O   | ILE | A | 312 | 0 | 26.154 | 33.467 | 37.739 | 1.00 | 25.31 |
|    | ATOM | 2398 | CB  | ILE | A | 312 | 0 | 28.397 | 33.179 | 35.670 | 1.00 | 24.45 |
|    | ATOM | 2399 | CG1 | ILE | A | 312 | 0 | 28.998 | 32.330 | 34.576 | 1.00 | 25.60 |
|    | ATOM | 2400 | CG2 | ILE | A | 312 | 0 | 29.261 | 34.373 | 36.075 | 1.00 | 26.44 |
| 15 | ATOM | 2401 | CD1 | ILE | A | 312 | 0 | 30.462 | 32.026 | 34.512 | 1.00 | 24.51 |
|    | ATOM | 2402 | N   | ASP | A | 313 | 0 | 28.008 | 33.523 | 39.003 | 1.00 | 28.70 |
|    | ATOM | 2403 | CA  | ASP | A | 313 | 0 | 27.432 | 34.339 | 40.071 | 1.00 | 30.99 |
|    | ATOM | 2404 | C   | ASP | A | 313 | 0 | 26.065 | 33.763 | 40.417 | 1.00 | 29.83 |
|    | ATOM | 2405 | O   | ASP | A | 313 | 0 | 25.024 | 34.385 | 40.235 | 1.00 | 28.51 |
| 20 | ATOM | 2406 | CB  | ASP | A | 313 | 0 | 27.266 | 35.777 | 39.576 | 1.00 | 35.88 |
|    | ATOM | 2407 | CG  | ASP | A | 313 | 0 | 28.532 | 36.505 | 39.187 | 1.00 | 40.21 |
|    | ATOM | 2408 | OD1 | ASP | A | 313 | 0 | 29.577 | 36.243 | 39.847 | 1.00 | 42.99 |
|    | ATOM | 2409 | OD2 | ASP | A | 313 | 0 | 28.525 | 37.346 | 38.252 | 1.00 | 40.95 |
|    | ATOM | 2410 | N   | PRO | A | 314 | 0 | 26.041 | 32.517 | 40.863 | 1.00 | 28.77 |
| 25 | ATOM | 2411 | CA  | PRO | A | 314 | 0 | 24.841 | 31.743 | 41.074 | 1.00 | 27.80 |
|    | ATOM | 2412 | C   | PRO | A | 314 | 0 | 23.865 | 32.198 | 42.137 | 1.00 | 26.49 |
|    | ATOM | 2413 | O   | PRO | A | 314 | 0 | 22.671 | 31.857 | 42.032 | 1.00 | 27.17 |
|    | ATOM | 2414 | CB  | PRO | A | 314 | 0 | 25.297 | 30.311 | 41.479 | 1.00 | 27.61 |
|    | ATOM | 2415 | CG  | PRO | A | 314 | 0 | 26.711 | 30.573 | 41.929 | 1.00 | 29.37 |
| 30 | ATOM | 2416 | CD  | PRO | A | 314 | 0 | 27.248 | 31.726 | 41.111 | 1.00 | 28.10 |
|    | ATOM | 2417 | N   | ALA | A | 315 | 0 | 24.364 | 32.818 | 43.206 | 1.00 | 23.45 |
|    | ATOM | 2418 | CA  | ALA | A | 315 | 0 | 23.505 | 33.092 | 44.336 | 1.00 | 22.34 |
|    | ATOM | 2419 | C   | ALA | A | 315 | 0 | 22.414 | 34.111 | 44.008 | 1.00 | 22.46 |
|    | ATOM | 2420 | O   | ALA | A | 315 | 0 | 22.678 | 35.127 | 43.370 | 1.00 | 22.52 |
| 35 | ATOM | 2421 | CB  | ALA | A | 315 | 0 | 24.294 | 33.617 | 45.532 | 1.00 | 21.68 |
|    | ATOM | 2422 | N   | ALA | A | 316 | 0 | 21.226 | 33.838 | 44.534 | 1.00 | 20.85 |
|    | ATOM | 2423 | CA  | ALA | A | 316 | 0 | 20.133 | 34.805 | 44.422 | 1.00 | 20.78 |
|    | ATOM | 2424 | C   | ALA | A | 316 | 0 | 20.547 | 36.010 | 45.271 | 1.00 | 20.55 |

|    |      |      |     |           |   |        |        |        |      |       |
|----|------|------|-----|-----------|---|--------|--------|--------|------|-------|
|    | ATOM | 2425 | O   | ALA A 316 | 0 | 21.143 | 35.846 | 46.333 | 1.00 | 21.47 |
|    | ATOM | 2426 | CB  | ALA A 316 | 0 | 18.897 | 34.166 | 45.043 | 1.00 | 18.32 |
|    | ATOM | 2427 | N   | PRO A 317 | 0 | 20.237 | 37.212 | 44.864 | 1.00 | 20.84 |
|    | ATOM | 2428 | CA  | PRO A 317 | 0 | 20.539 | 38.410 | 45.634 | 1.00 | 20.82 |
| 5  | ATOM | 2429 | C   | PRO A 317 | 0 | 19.766 | 38.449 | 46.945 | 1.00 | 20.96 |
|    | ATOM | 2430 | O   | PRO A 317 | 0 | 18.668 | 37.885 | 47.030 | 1.00 | 21.42 |
|    | ATOM | 2431 | CB  | PRO A 317 | 0 | 20.064 | 39.590 | 44.758 | 1.00 | 21.64 |
|    | ATOM | 2432 | CG  | PRO A 317 | 0 | 19.178 | 38.938 | 43.746 | 1.00 | 21.69 |
|    | ATOM | 2433 | CD  | PRO A 317 | 0 | 19.517 | 37.466 | 43.619 | 1.00 | 20.10 |
| 10 | ATOM | 2434 | N   | GLY A 318 | 0 | 20.269 | 39.080 | 47.988 | 1.00 | 20.69 |
|    | ATOM | 2435 | CA  | GLY A 318 | 0 | 19.533 | 39.282 | 49.225 | 1.00 | 21.68 |
|    | ATOM | 2436 | C   | GLY A 318 | 0 | 19.631 | 38.218 | 50.283 | 1.00 | 22.93 |
|    | ATOM | 2437 | O   | GLY A 318 | 0 | 20.344 | 37.221 | 50.101 | 1.00 | 23.87 |
|    | ATOM | 2438 | N   | ILE A 319 | 0 | 18.895 | 38.398 | 51.368 | 1.00 | 22.20 |
| 15 | ATOM | 2439 | CA  | ILE A 319 | 0 | 18.879 | 37.432 | 52.454 | 1.00 | 24.16 |
| 15 | ATOM | 2440 | C   | ILE A 319 | 0 | 18.169 | 36.189 | 51.956 | 1.00 | 25.28 |
| 15 | ATOM | 2441 | O   | ILE A 319 | 0 | 17.071 | 36.271 | 51.405 | 1.00 | 26.26 |
| 15 | ATOM | 2442 | CB  | ILE A 319 | 0 | 18.208 | 38.030 | 53.704 | 1.00 | 24.54 |
| 15 | ATOM | 2443 | CG1 | ILE A 319 | 0 | 19.075 | 39.176 | 54.213 | 1.00 | 25.08 |
| 20 | ATOM | 2444 | CG2 | ILE A 319 | 0 | 17.944 | 37.012 | 54.793 | 1.00 | 24.03 |
| 20 | ATOM | 2445 | CD1 | ILE A 319 | 0 | 18.262 | 40.183 | 55.006 | 1.00 | 27.56 |
| 20 | ATOM | 2446 | N   | PRO A 320 | 0 | 18.762 | 35.030 | 52.159 | 1.00 | 26.23 |
| 25 | ATOM | 2447 | CA  | PRO A 320 | 0 | 18.273 | 33.748 | 51.684 | 1.00 | 26.64 |
| 25 | ATOM | 2448 | C   | PRO A 320 | 0 | 17.105 | 33.172 | 52.453 | 1.00 | 26.74 |
| 25 | ATOM | 2449 | O   | PRO A 320 | 0 | 17.140 | 32.025 | 52.896 | 1.00 | 27.54 |
|    | ATOM | 2450 | CB  | PRO A 320 | 0 | 19.501 | 32.801 | 51.772 | 1.00 | 27.16 |
|    | ATOM | 2451 | CG  | PRO A 320 | 0 | 20.216 | 33.388 | 52.985 | 1.00 | 25.20 |
|    | ATOM | 2452 | CD  | PRO A 320 | 0 | 20.061 | 34.891 | 52.837 | 1.00 | 25.62 |
|    | ATOM | 2453 | N   | THR A 321 | 0 | 16.022 | 33.909 | 52.611 | 1.00 | 27.35 |
| 30 | ATOM | 2454 | CA  | THR A 321 | 0 | 14.820 | 33.550 | 53.329 | 1.00 | 28.07 |
|    | ATOM | 2455 | C   | THR A 321 | 0 | 13.632 | 34.190 | 52.603 | 1.00 | 27.48 |
|    | ATOM | 2456 | O   | THR A 321 | 0 | 13.597 | 35.383 | 52.302 | 1.00 | 27.13 |
|    | ATOM | 2457 | CB  | THR A 321 | 0 | 14.824 | 34.085 | 54.780 | 1.00 | 29.87 |
|    | ATOM | 2458 | OG1 | THR A 321 | 0 | 15.957 | 33.582 | 55.511 | 1.00 | 31.85 |
| 35 | ATOM | 2459 | CG2 | THR A 321 | 0 | 13.548 | 33.687 | 55.507 | 1.00 | 31.06 |
|    | ATOM | 2460 | N   | PRO A 322 | 0 | 12.630 | 33.378 | 52.326 | 1.00 | 26.63 |
|    | ATOM | 2461 | CA  | PRO A 322 | 0 | 11.428 | 33.824 | 51.637 | 1.00 | 25.91 |
|    | ATOM | 2462 | C   | PRO A 322 | 0 | 10.892 | 35.072 | 52.313 | 1.00 | 25.37 |

|    |      |      |     |           |   |        |        |        |      |       |
|----|------|------|-----|-----------|---|--------|--------|--------|------|-------|
|    | ATOM | 2463 | O   | PRO A 322 | 0 | 10.945 | 35.194 | 53.542 | 1.00 | 25.02 |
|    | ATOM | 2464 | CB  | PRO A 322 | 0 | 10.456 | 32.638 | 51.661 | 1.00 | 26.11 |
|    | ATOM | 2465 | CG  | PRO A 322 | 0 | 11.370 | 31.477 | 51.931 | 1.00 | 26.67 |
|    | ATOM | 2466 | CD  | PRO A 322 | 0 | 12.592 | 31.961 | 52.691 | 1.00 | 26.21 |
| 5  | ATOM | 2467 | N   | GLY A 323 | 0 | 10.432 | 36.075 | 51.573 | 1.00 | 24.30 |
|    | ATOM | 2468 | CA  | GLY A 323 | 0 | 9.943  | 37.288 | 52.197 | 1.00 | 24.13 |
|    | ATOM | 2469 | C   | GLY A 323 | 0 | 11.013 | 38.161 | 52.842 | 1.00 | 25.48 |
|    | ATOM | 2470 | O   | GLY A 323 | 0 | 10.603 | 39.128 | 53.512 | 1.00 | 25.28 |
|    | ATOM | 2471 | N   | ALA A 324 | 0 | 12.320 | 37.959 | 52.688 | 1.00 | 24.80 |
| 10 | ATOM | 2472 | CA  | ALA A 324 | 0 | 13.278 | 38.831 | 53.377 | 1.00 | 24.61 |
|    | ATOM | 2473 | C   | ALA A 324 | 0 | 14.034 | 39.773 | 52.451 | 1.00 | 23.92 |
|    | ATOM | 2474 | O   | ALA A 324 | 0 | 15.148 | 40.225 | 52.748 | 1.00 | 24.53 |
|    | ATOM | 2475 | CB  | ALA A 324 | 0 | 14.255 | 38.012 | 54.204 | 1.00 | 23.79 |
|    | ATOM | 2476 | N   | ALA A 325 | 0 | 13.423 | 40.081 | 51.315 | 1.00 | 22.22 |
| 15 | ATOM | 2477 | CA  | ALA A 325 | 0 | 14.033 | 40.985 | 50.341 | 1.00 | 20.42 |
| 16 | ATOM | 2478 | C   | ALA A 325 | 0 | 13.825 | 42.423 | 50.803 | 1.00 | 19.97 |
| 17 | ATOM | 2479 | O   | ALA A 325 | 0 | 12.987 | 42.648 | 51.677 | 1.00 | 18.14 |
| 18 | ATOM | 2480 | CB  | ALA A 325 | 0 | 13.272 | 40.763 | 49.018 | 1.00 | 19.40 |
| 19 | ATOM | 2481 | N   | ASP A 326 | 0 | 14.422 | 43.421 | 50.161 | 1.00 | 20.69 |
| 20 | ATOM | 2482 | CA  | ASP A 326 | 0 | 14.141 | 44.804 | 50.529 | 1.00 | 22.54 |
| 21 | ATOM | 2483 | C   | ASP A 326 | 0 | 12.702 | 45.158 | 50.220 | 1.00 | 22.83 |
| 22 | ATOM | 2484 | O   | ASP A 326 | 0 | 12.015 | 45.754 | 51.030 | 1.00 | 23.68 |
| 23 | ATOM | 2485 | CB  | ASP A 326 | 0 | 15.089 | 45.767 | 49.789 | 1.00 | 22.32 |
| 24 | ATOM | 2486 | CG  | ASP A 326 | 0 | 16.494 | 45.378 | 50.238 | 1.00 | 23.83 |
| 25 | ATOM | 2487 | OD1 | ASP A 326 | 0 | 16.650 | 45.284 | 51.475 | 1.00 | 24.78 |
| 26 | ATOM | 2488 | OD2 | ASP A 326 | 0 | 17.393 | 45.171 | 49.409 | 1.00 | 24.90 |
| 27 | ATOM | 2489 | N   | VAL A 327 | 0 | 12.254 | 44.821 | 49.026 | 1.00 | 24.29 |
| 28 | ATOM | 2490 | CA  | VAL A 327 | 0 | 10.914 | 45.064 | 48.503 | 1.00 | 23.57 |
| 29 | ATOM | 2491 | C   | VAL A 327 | 0 | 10.246 | 43.721 | 48.170 | 1.00 | 23.46 |
| 30 | ATOM | 2492 | O   | VAL A 327 | 0 | 10.785 | 42.933 | 47.386 | 1.00 | 22.62 |
|    | ATOM | 2493 | CB  | VAL A 327 | 0 | 10.946 | 45.898 | 47.220 | 1.00 | 24.70 |
|    | ATOM | 2494 | CG1 | VAL A 327 | 0 | 9.554  | 46.274 | 46.751 | 1.00 | 24.11 |
|    | ATOM | 2495 | CG2 | VAL A 327 | 0 | 11.773 | 47.173 | 47.420 | 1.00 | 26.30 |
|    | ATOM | 2496 | N   | ASN A 328 | 0 | 9.113  | 43.463 | 48.811 | 1.00 | 21.44 |
| 35 | ATOM | 2497 | CA  | ASN A 328 | 0 | 8.390  | 42.212 | 48.717 | 1.00 | 23.21 |
|    | ATOM | 2498 | C   | ASN A 328 | 0 | 6.986  | 42.410 | 48.158 | 1.00 | 23.12 |
|    | ATOM | 2499 | O   | ASN A 328 | 0 | 6.140  | 43.030 | 48.799 | 1.00 | 22.76 |
|    | ATOM | 2500 | CB  | ASN A 328 | 0 | 8.223  | 41.603 | 50.121 | 1.00 | 23.09 |

|      |      |     |     |   |     |   |        |        |        |      |       |
|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
| ATOM | 2501 | CG  | ASN | A | 328 | 0 | 9.569  | 41.204 | 50.693 | 1.00 | 24.61 |
| ATOM | 2502 | OD1 | ASN | A | 328 | 0 | 10.181 | 40.188 | 50.295 | 1.00 | 25.87 |
| ATOM | 2503 | ND2 | ASN | A | 328 | 0 | 10.017 | 42.029 | 51.617 | 1.00 | 21.47 |
| ATOM | 2504 | N   | LEU | A | 329 | 0 | 6.776  | 42.000 | 46.923 | 1.00 | 23.14 |
| ATOM | 2505 | CA  | LEU | A | 329 | 0 | 5.497  | 42.179 | 46.268 | 1.00 | 24.23 |
| ATOM | 2506 | C   | LEU | A | 329 | 0 | 4.859  | 40.822 | 45.953 | 1.00 | 25.21 |
| ATOM | 2507 | O   | LEU | A | 329 | 0 | 5.489  | 39.876 | 45.469 | 1.00 | 24.20 |
| ATOM | 2508 | CB  | LEU | A | 329 | 0 | 5.622  | 42.963 | 44.948 | 1.00 | 24.33 |
| ATOM | 2509 | CG  | LEU | A | 329 | 0 | 6.369  | 44.279 | 45.082 | 1.00 | 26.30 |
| ATOM | 2510 | CD1 | LEU | A | 329 | 0 | 6.778  | 44.884 | 43.757 | 1.00 | 26.24 |
| ATOM | 2511 | CD2 | LEU | A | 329 | 0 | 5.550  | 45.249 | 45.913 | 1.00 | 27.07 |
| ATOM | 2512 | N   | ARG | A | 330 | 0 | 3.562  | 40.806 | 46.204 | 1.00 | 25.13 |
| ATOM | 2513 | CA  | ARG | A | 330 | 0 | 2.740  | 39.641 | 45.899 | 1.00 | 27.48 |
| ATOM | 2514 | C   | ARG | A | 330 | 0 | 1.628  | 40.116 | 44.965 | 1.00 | 27.52 |
| ATOM | 2515 | O   | ARG | A | 330 | 0 | 0.988  | 41.132 | 45.257 | 1.00 | 27.17 |
| ATOM | 2516 | CB  | ARG | A | 330 | 0 | 2.200  | 39.017 | 47.166 | 1.00 | 29.82 |
| ATOM | 2517 | CG  | ARG | A | 330 | 0 | 1.351  | 37.794 | 46.932 | 1.00 | 33.18 |
| ATOM | 2518 | CD  | ARG | A | 330 | 0 | 0.880  | 37.251 | 48.284 | 1.00 | 37.06 |
| ATOM | 2519 | NE  | ARG | A | 330 | 0 | 0.305  | 35.914 | 48.038 | 1.00 | 40.34 |
| ATOM | 2520 | CZ  | ARG | A | 330 | 0 | 1.009  | 34.803 | 48.298 | 1.00 | 40.82 |
| ATOM | 2521 | NH1 | ARG | A | 330 | 0 | 2.229  | 34.903 | 48.812 | 1.00 | 40.36 |
| ATOM | 2522 | NH2 | ARG | A | 330 | 0 | 0.415  | 33.642 | 48.040 | 1.00 | 41.33 |
| ATOM | 2523 | N   | PHE | A | 331 | 0 | 1.507  | 39.481 | 43.795 | 1.00 | 25.88 |
| ATOM | 2524 | CA  | PHE | A | 331 | 0 | 0.475  | 39.937 | 42.855 | 1.00 | 25.87 |
| ATOM | 2525 | C   | PHE | A | 331 | 0 | -0.657 | 38.919 | 42.779 | 1.00 | 25.94 |
| ATOM | 2526 | O   | PHE | A | 331 | 0 | -0.441 | 37.697 | 42.824 | 1.00 | 24.61 |
| ATOM | 2527 | CB  | PHE | A | 331 | 0 | 1.102  | 40.269 | 41.511 | 1.00 | 25.94 |
| ATOM | 2528 | CG  | PHE | A | 331 | 0 | 1.884  | 41.565 | 41.496 | 1.00 | 28.66 |
| ATOM | 2529 | CD1 | PHE | A | 331 | 0 | 1.282  | 42.782 | 41.759 | 1.00 | 28.04 |
| ATOM | 2530 | CD2 | PHE | A | 331 | 0 | 3.246  | 41.569 | 41.214 | 1.00 | 29.71 |
| ATOM | 2531 | CE1 | PHE | A | 331 | 0 | 1.988  | 43.963 | 41.744 | 1.00 | 29.21 |
| ATOM | 2532 | CE2 | PHE | A | 331 | 0 | 3.975  | 42.753 | 41.181 | 1.00 | 30.61 |
| ATOM | 2533 | CZ  | PHE | A | 331 | 0 | 3.348  | 43.965 | 41.453 | 1.00 | 30.66 |
| ATOM | 2534 | N   | GLN | A | 332 | 0 | -1.873 | 39.446 | 42.676 | 1.00 | 25.58 |
| ATOM | 2535 | CA  | GLN | A | 332 | 0 | -3.085 | 38.628 | 42.608 | 1.00 | 26.60 |
| ATOM | 2536 | C   | GLN | A | 332 | 0 | -3.672 | 38.698 | 41.203 | 1.00 | 23.61 |
| ATOM | 2537 | O   | GLN | A | 332 | 0 | -4.136 | 39.739 | 40.755 | 1.00 | 21.73 |
| ATOM | 2538 | CB  | GLN | A | 332 | 0 | -4.110 | 39.094 | 43.630 | 1.00 | 30.32 |

|      |      |     |     |   |     |   |         |        |        |      |       |
|------|------|-----|-----|---|-----|---|---------|--------|--------|------|-------|
| ATOM | 2539 | CG  | GLN | A | 332 | 0 | -5.412  | 38.299 | 43.642 | 1.00 | 35.72 |
| ATOM | 2540 | CD  | GLN | A | 332 | 0 | -5.199  | 36.961 | 44.325 | 1.00 | 39.98 |
| ATOM | 2541 | OE1 | GLN | A | 332 | 0 | -5.859  | 35.961 | 44.007 | 1.00 | 42.32 |
| ATOM | 2542 | NE2 | GLN | A | 332 | 0 | -4.257  | 36.915 | 45.270 | 1.00 | 42.27 |
| ATOM | 2543 | N   | LEU | A | 333 | 0 | -3.612  | 37.576 | 40.504 | 1.00 | 23.60 |
| ATOM | 2544 | CA  | LEU | A | 333 | 0 | -4.105  | 37.565 | 39.118 | 1.00 | 26.25 |
| ATOM | 2545 | C   | LEU | A | 333 | 0 | -5.627  | 37.373 | 39.123 | 1.00 | 26.55 |
| ATOM | 2546 | O   | LEU | A | 333 | 0 | -6.107  | 36.655 | 39.998 | 1.00 | 25.70 |
| ATOM | 2547 | CB  | LEU | A | 333 | 0 | -3.424  | 36.465 | 38.304 | 1.00 | 25.25 |
| ATOM | 2548 | CG  | LEU | A | 333 | 0 | -1.919  | 36.608 | 38.052 | 1.00 | 25.72 |
| ATOM | 2549 | CD1 | LEU | A | 333 | 0 | -1.431  | 35.565 | 37.067 | 1.00 | 23.66 |
| ATOM | 2550 | CD2 | LEU | A | 333 | 0 | -1.551  | 38.000 | 37.558 | 1.00 | 25.25 |
| ATOM | 2551 | N   | GLY | A | 334 | 0 | -6.327  | 37.976 | 38.188 | 1.00 | 27.85 |
| ATOM | 2552 | CA  | GLY | A | 334 | 0 | -7.770  | 37.782 | 38.118 | 1.00 | 29.96 |
| ATOM | 2553 | C   | GLY | A | 334 | 0 | -8.253  | 37.802 | 36.672 | 1.00 | 32.36 |
| ATOM | 2554 | O   | GLY | A | 334 | 0 | -7.559  | 38.175 | 35.719 | 1.00 | 30.74 |
| ATOM | 2555 | N   | PHE | A | 335 | 0 | -9.502  | 37.377 | 36.544 | 1.00 | 34.76 |
| ATOM | 2556 | CA  | PHE | A | 335 | 0 | -10.181 | 37.360 | 35.260 | 1.00 | 38.54 |
| ATOM | 2557 | C   | PHE | A | 335 | 0 | -11.625 | 37.806 | 35.514 | 1.00 | 41.05 |
| ATOM | 2558 | O   | PHE | A | 335 | 0 | -12.443 | 37.028 | 36.021 | 1.00 | 41.53 |
| ATOM | 2559 | CB  | PHE | A | 335 | 0 | -10.183 | 36.003 | 34.586 | 1.00 | 39.00 |
| ATOM | 2560 | CG  | PHE | A | 335 | 0 | -10.772 | 36.105 | 33.197 | 1.00 | 40.61 |
| ATOM | 2561 | CD1 | PHE | A | 335 | 0 | -10.052 | 36.686 | 32.175 | 1.00 | 40.45 |
| ATOM | 2562 | CD2 | PHE | A | 335 | 0 | -12.045 | 35.614 | 32.942 | 1.00 | 41.39 |
| ATOM | 2563 | CE1 | PHE | A | 335 | 0 | -10.580 | 36.778 | 30.901 | 1.00 | 40.81 |
| ATOM | 2564 | CE2 | PHE | A | 335 | 0 | -12.588 | 35.697 | 31.671 | 1.00 | 41.51 |
| ATOM | 2565 | CZ  | PHE | A | 335 | 0 | -11.849 | 36.281 | 30.652 | 1.00 | 41.87 |
| ATOM | 2566 | N   | SER | A | 336 | 0 | -11.861 | 39.075 | 35.193 | 1.00 | 42.39 |
| ATOM | 2567 | CA  | SER | A | 336 | 0 | -13.203 | 39.582 | 35.445 | 1.00 | 44.12 |
| ATOM | 2568 | C   | SER | A | 336 | 0 | -13.704 | 40.525 | 34.370 | 1.00 | 44.31 |
| ATOM | 2569 | O   | SER | A | 336 | 0 | -13.028 | 41.440 | 33.903 | 1.00 | 44.49 |
| ATOM | 2570 | CB  | SER | A | 336 | 0 | -13.214 | 40.206 | 36.842 | 1.00 | 45.46 |
| ATOM | 2571 | OG  | SER | A | 336 | 0 | -13.727 | 39.233 | 37.758 | 1.00 | 47.11 |
| ATOM | 2572 | N   | GLY | A | 337 | 0 | -14.963 | 40.267 | 33.983 | 1.00 | 44.12 |
| ATOM | 2573 | CA  | GLY | A | 337 | 0 | -15.630 | 41.067 | 32.959 | 1.00 | 41.89 |
| ATOM | 2574 | C   | GLY | A | 337 | 0 | -14.963 | 40.920 | 31.608 | 1.00 | 40.08 |
| ATOM | 2575 | O   | GLY | A | 337 | 0 | -14.712 | 41.891 | 30.888 | 1.00 | 41.35 |
| ATOM | 2576 | N   | GLY | A | 338 | 0 | -14.583 | 39.699 | 31.263 | 1.00 | 39.12 |



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|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 2615 | CG2 | ILE | A | 342 | 0 | -2.250 | 43.540 | 36.800 | 1.00 | 24.57 |
|    | ATOM | 2616 | CD1 | ILE | A | 342 | 0 | -0.260 | 41.661 | 38.949 | 1.00 | 24.53 |
|    | ATOM | 2617 | N   | ASN | A | 343 | 0 | -4.282 | 42.601 | 40.650 | 1.00 | 17.77 |
|    | ATOM | 2618 | CA  | ASN | A | 343 | 0 | -4.702 | 43.413 | 41.782 | 1.00 | 21.51 |
| 5  | ATOM | 2619 | C   | ASN | A | 343 | 0 | -5.881 | 44.287 | 41.394 | 1.00 | 21.43 |
|    | ATOM | 2620 | O   | ASN | A | 343 | 0 | -5.903 | 45.495 | 41.598 | 1.00 | 20.26 |
|    | ATOM | 2621 | CB  | ASN | A | 343 | 0 | -3.513 | 44.231 | 42.356 | 1.00 | 22.34 |
|    | ATOM | 2622 | CG  | ASN | A | 343 | 0 | -2.685 | 43.190 | 43.073 | 1.00 | 25.38 |
|    | ATOM | 2623 | OD1 | ASN | A | 343 | 0 | -2.075 | 42.218 | 42.598 | 1.00 | 26.90 |
| 10 | ATOM | 2624 | ND2 | ASN | A | 343 | 0 | -2.652 | 43.238 | 44.425 | 1.00 | 25.34 |
|    | ATOM | 2625 | N   | GLY | A | 344 | 0 | -6.875 | 43.703 | 40.730 | 1.00 | 23.77 |
|    | ATOM | 2626 | CA  | GLY | A | 344 | 0 | -8.078 | 44.406 | 40.324 | 1.00 | 25.28 |
|    | ATOM | 2627 | C   | GLY | A | 344 | 0 | -7.954 | 45.280 | 39.111 | 1.00 | 26.82 |
|    | ATOM | 2628 | O   | GLY | A | 344 | 0 | -9.029 | 45.728 | 38.672 | 1.00 | 29.56 |
|    | ATOM | 2629 | N   | THR | A | 345 | 0 | -6.798 | 45.561 | 38.527 | 1.00 | 26.28 |
|    | ATOM | 2630 | CA  | THR | A | 345 | 0 | -6.766 | 46.440 | 37.366 | 1.00 | 25.48 |
|    | ATOM | 2631 | C   | THR | A | 345 | 0 | -6.343 | 45.703 | 36.109 | 1.00 | 26.49 |
|    | ATOM | 2632 | O   | THR | A | 345 | 0 | -5.385 | 44.925 | 36.122 | 1.00 | 28.22 |
|    | ATOM | 2633 | CB  | THR | A | 345 | 0 | -5.829 | 47.648 | 37.589 | 1.00 | 26.17 |
|    | ATOM | 2634 | OG1 | THR | A | 345 | 0 | -6.191 | 48.334 | 38.788 | 1.00 | 25.32 |
|    | ATOM | 2635 | CG2 | THR | A | 345 | 0 | -5.867 | 48.677 | 36.462 | 1.00 | 24.83 |
|    | ATOM | 2636 | N   | ALA | A | 346 | 0 | -7.017 | 46.012 | 35.008 | 1.00 | 24.80 |
|    | ATOM | 2637 | CA  | ALA | A | 346 | 0 | -6.768 | 45.491 | 33.688 | 1.00 | 23.82 |
|    | ATOM | 2638 | C   | ALA | A | 346 | 0 | -5.862 | 46.511 | 32.997 | 1.00 | 23.77 |
|    | ATOM | 2639 | O   | ALA | A | 346 | 0 | -6.098 | 47.711 | 33.088 | 1.00 | 22.93 |
|    | ATOM | 2640 | CB  | ALA | A | 346 | 0 | -8.031 | 45.353 | 32.841 | 1.00 | 24.13 |
|    | ATOM | 2641 | N   | TYR | A | 347 | 0 | -4.793 | 46.023 | 32.392 | 1.00 | 22.69 |
|    | ATOM | 2642 | CA  | TYR | A | 347 | 0 | -3.862 | 46.949 | 31.792 | 1.00 | 22.75 |
|    | ATOM | 2643 | C   | TYR | A | 347 | 0 | -4.483 | 47.532 | 30.527 | 1.00 | 23.42 |
| 30 | ATOM | 2644 | O   | TYR | A | 347 | 0 | -4.954 | 46.753 | 29.709 | 1.00 | 22.19 |
|    | ATOM | 2645 | CB  | TYR | A | 347 | 0 | -2.521 | 46.274 | 31.455 | 1.00 | 21.25 |
|    | ATOM | 2646 | CG  | TYR | A | 347 | 0 | -1.584 | 47.221 | 30.732 | 1.00 | 18.93 |
|    | ATOM | 2647 | CD1 | TYR | A | 347 | 0 | -0.819 | 48.137 | 31.442 | 1.00 | 18.17 |
|    | ATOM | 2648 | CD2 | TYR | A | 347 | 0 | -1.473 | 47.176 | 29.353 | 1.00 | 19.30 |
| 35 | ATOM | 2649 | CE1 | TYR | A | 347 | 0 | 0.034  | 49.003 | 30.763 | 1.00 | 18.37 |
|    | ATOM | 2650 | CE2 | TYR | A | 347 | 0 | -0.650 | 48.063 | 28.664 | 1.00 | 18.40 |
|    | ATOM | 2651 | CZ  | TYR | A | 347 | 0 | 0.102  | 48.962 | 29.394 | 1.00 | 18.99 |
|    | ATOM | 2652 | OH  | TYR | A | 347 | 0 | 0.947  | 49.802 | 28.706 | 1.00 | 19.65 |





|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 2691 | O   | PRO | A | 353 | 0 | 5.393  | 57.852 | 28.483 | 1.00 | 21.91 |
|    | ATOM | 2692 | CB  | PRO | A | 353 | 0 | 5.417  | 56.054 | 25.916 | 1.00 | 23.95 |
|    | ATOM | 2693 | CG  | PRO | A | 353 | 0 | 5.181  | 57.123 | 24.878 | 1.00 | 23.79 |
|    | ATOM | 2694 | CD  | PRO | A | 353 | 0 | 3.882  | 57.848 | 25.180 | 1.00 | 23.03 |
| 5  | ATOM | 2695 | N   | THR | A | 354 | 0 | 5.043  | 55.778 | 29.234 | 1.00 | 18.66 |
|    | ATOM | 2696 | CA  | THR | A | 354 | 0 | 5.646  | 56.015 | 30.530 | 1.00 | 18.05 |
|    | ATOM | 2697 | C   | THR | A | 354 | 0 | 6.981  | 56.739 | 30.478 | 1.00 | 18.33 |
|    | ATOM | 2698 | O   | THR | A | 354 | 0 | 7.168  | 57.630 | 31.319 | 1.00 | 19.46 |
|    | ATOM | 2699 | CB  | THR | A | 354 | 0 | 5.871  | 54.661 | 31.242 | 1.00 | 17.10 |
| 10 | ATOM | 2700 | OG1 | THR | A | 354 | 0 | 4.903  | 53.710 | 30.797 | 1.00 | 17.24 |
|    | ATOM | 2701 | CG2 | THR | A | 354 | 0 | 5.772  | 54.852 | 32.741 | 1.00 | 16.43 |
|    | ATOM | 2702 | N   | LEU | A | 355 | 0 | 7.940  | 56.380 | 29.618 | 1.00 | 17.49 |
|    | ATOM | 2703 | CA  | LEU | A | 355 | 0 | 9.215  | 57.076 | 29.604 | 1.00 | 18.84 |
|    | ATOM | 2704 | C   | LEU | A | 355 | 0 | 9.013  | 58.579 | 29.284 | 1.00 | 19.80 |
|    | ATOM | 2705 | O   | LEU | A | 355 | 0 | 9.722  | 59.417 | 29.849 | 1.00 | 17.13 |
|    | ATOM | 2706 | CB  | LEU | A | 355 | 0 | 10.200 | 56.498 | 28.622 | 1.00 | 17.89 |
|    | ATOM | 2707 | CG  | LEU | A | 355 | 0 | 11.703 | 56.488 | 28.819 | 1.00 | 18.66 |
|    | ATOM | 2708 | CD1 | LEU | A | 355 | 0 | 12.436 | 56.851 | 27.547 | 1.00 | 18.37 |
|    | ATOM | 2709 | CD2 | LEU | A | 355 | 0 | 12.199 | 57.204 | 30.056 | 1.00 | 16.79 |
|    | ATOM | 2710 | N   | LEU | A | 356 | 0 | 8.134  | 58.883 | 28.328 | 1.00 | 20.48 |
|    | ATOM | 2711 | CA  | LEU | A | 356 | 0 | 7.812  | 60.274 | 27.993 | 1.00 | 21.62 |
|    | ATOM | 2712 | C   | LEU | A | 356 | 0 | 7.085  | 60.932 | 29.163 | 1.00 | 21.28 |
|    | ATOM | 2713 | O   | LEU | A | 356 | 0 | 7.497  | 62.042 | 29.506 | 1.00 | 22.01 |
|    | ATOM | 2714 | CB  | LEU | A | 356 | 0 | 7.028  | 60.474 | 26.700 | 1.00 | 22.08 |
|    | ATOM | 2715 | CG  | LEU | A | 356 | 0 | 6.850  | 61.939 | 26.239 | 1.00 | 23.98 |
|    | ATOM | 2716 | CD1 | LEU | A | 356 | 0 | 8.157  | 62.709 | 26.207 | 1.00 | 23.11 |
|    | ATOM | 2717 | CD2 | LEU | A | 356 | 0 | 6.191  | 61.985 | 24.864 | 1.00 | 24.74 |
|    | ATOM | 2718 | N   | GLN | A | 357 | 0 | 6.219  | 60.267 | 29.922 | 1.00 | 21.37 |
|    | ATOM | 2719 | CA  | GLN | A | 357 | 0 | 5.669  | 60.893 | 31.120 | 1.00 | 21.87 |
| 30 | ATOM | 2720 | C   | GLN | A | 357 | 0 | 6.759  | 61.254 | 32.128 | 1.00 | 24.12 |
|    | ATOM | 2721 | O   | GLN | A | 357 | 0 | 6.674  | 62.277 | 32.811 | 1.00 | 24.92 |
|    | ATOM | 2722 | CB  | GLN | A | 357 | 0 | 4.636  | 60.015 | 31.822 | 1.00 | 20.63 |
|    | ATOM | 2723 | CG  | GLN | A | 357 | 0 | 3.447  | 59.674 | 30.906 | 1.00 | 19.17 |
|    | ATOM | 2724 | CD  | GLN | A | 357 | 0 | 2.547  | 58.643 | 31.540 | 1.00 | 18.85 |
| 35 | ATOM | 2725 | OE1 | GLN | A | 357 | 0 | 2.162  | 58.748 | 32.713 | 1.00 | 19.06 |
|    | ATOM | 2726 | NE2 | GLN | A | 357 | 0 | 2.262  | 57.600 | 30.742 | 1.00 | 18.49 |
|    | ATOM | 2727 | N   | ILE | A | 358 | 0 | 7.735  | 60.371 | 32.346 | 1.00 | 25.66 |
|    | ATOM | 2728 | CA  | ILE | A | 358 | 0 | 8.822  | 60.651 | 33.263 | 1.00 | 26.19 |

|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 2729 | C   | ILE | A | 358 | 0 | 9.699  | 61.800 | 32.762 | 1.00 | 27.66 |
|    | ATOM | 2730 | O   | ILE | A | 358 | 0 | 9.940  | 62.725 | 33.551 | 1.00 | 26.65 |
|    | ATOM | 2731 | CB  | ILE | A | 358 | 0 | 9.692  | 59.420 | 33.578 | 1.00 | 24.79 |
|    | ATOM | 2732 | CG1 | ILE | A | 358 | 0 | 8.807  | 58.395 | 34.304 | 1.00 | 24.09 |
| 5  | ATOM | 2733 | CG2 | ILE | A | 358 | 0 | 10.865 | 59.841 | 34.451 | 1.00 | 23.78 |
|    | ATOM | 2734 | CD1 | ILE | A | 358 | 0 | 9.251  | 56.954 | 34.234 | 1.00 | 23.34 |
|    | ATOM | 2735 | N   | MET | A | 359 | 0 | 10.054 | 61.844 | 31.486 | 1.00 | 29.63 |
|    | ATOM | 2736 | CA  | MET | A | 359 | 0 | 10.893 | 62.910 | 30.965 | 1.00 | 33.02 |
|    | ATOM | 2737 | C   | MET | A | 359 | 0 | 10.174 | 64.260 | 31.027 | 1.00 | 34.46 |
| 10 | ATOM | 2738 | O   | MET | A | 359 | 0 | 10.801 | 65.324 | 31.026 | 1.00 | 33.77 |
|    | ATOM | 2739 | CB  | MET | A | 359 | 0 | 11.346 | 62.664 | 29.537 | 1.00 | 35.67 |
|    | ATOM | 2740 | CG  | MET | A | 359 | 0 | 12.065 | 61.403 | 29.138 | 1.00 | 40.75 |
|    | ATOM | 2741 | SD  | MET | A | 359 | 0 | 13.764 | 61.153 | 29.671 | 1.00 | 44.90 |
|    | ATOM | 2742 | CE  | MET | A | 359 | 0 | 14.594 | 62.592 | 29.007 | 1.00 | 44.24 |
|    | ATOM | 2743 | N   | SER | A | 360 | 0 | 8.835  | 64.238 | 31.070 | 1.00 | 33.43 |
|    | ATOM | 2744 | CA  | SER | A | 360 | 0 | 8.024  | 65.430 | 31.088 | 1.00 | 32.92 |
|    | ATOM | 2745 | C   | SER | A | 360 | 0 | 7.761  | 65.995 | 32.474 | 1.00 | 33.24 |
|    | ATOM | 2746 | O   | SER | A | 360 | 0 | 6.989  | 66.966 | 32.556 | 1.00 | 34.08 |
|    | ATOM | 2747 | CB  | SER | A | 360 | 0 | 6.678  | 65.134 | 30.393 | 1.00 | 31.34 |
|    | ATOM | 2748 | OG  | SER | A | 360 | 0 | 6.928  | 65.109 | 28.996 | 1.00 | 31.06 |
|    | ATOM | 2749 | N   | GLY | A | 361 | 0 | 8.288  | 65.360 | 33.517 | 1.00 | 32.06 |
|    | ATOM | 2750 | CA  | GLY | A | 361 | 0 | 8.072  | 65.868 | 34.847 | 1.00 | 31.80 |
|    | ATOM | 2751 | C   | GLY | A | 361 | 0 | 7.487  | 64.955 | 35.880 | 1.00 | 32.48 |
|    | ATOM | 2752 | O   | GLY | A | 361 | 0 | 7.420  | 65.377 | 37.043 | 1.00 | 33.20 |
|    | ATOM | 2753 | N   | ALA | A | 362 | 0 | 6.991  | 63.769 | 35.535 | 1.00 | 33.69 |
|    | ATOM | 2754 | CA  | ALA | A | 362 | 0 | 6.406  | 62.926 | 36.601 | 1.00 | 35.10 |
|    | ATOM | 2755 | C   | ALA | A | 362 | 0 | 7.475  | 62.615 | 37.650 | 1.00 | 34.45 |
|    | ATOM | 2756 | O   | ALA | A | 362 | 0 | 8.598  | 62.306 | 37.286 | 1.00 | 33.60 |
|    | ATOM | 2757 | CB  | ALA | A | 362 | 0 | 5.789  | 61.658 | 36.043 | 1.00 | 34.88 |
| 30 | ATOM | 2758 | N   | GLN | A | 363 | 0 | 7.146  | 62.676 | 38.920 | 1.00 | 36.22 |
|    | ATOM | 2759 | CA  | GLN | A | 363 | 0 | 8.083  | 62.458 | 40.007 | 1.00 | 37.87 |
|    | ATOM | 2760 | C   | GLN | A | 363 | 0 | 7.776  | 61.189 | 40.787 | 1.00 | 37.20 |
|    | ATOM | 2761 | O   | GLN | A | 363 | 0 | 8.620  | 60.777 | 41.587 | 1.00 | 36.79 |
|    | ATOM | 2762 | CB  | GLN | A | 363 | 0 | 8.012  | 63.619 | 41.022 | 1.00 | 40.41 |
| 35 | ATOM | 2763 | CG  | GLN | A | 363 | 0 | 8.986  | 64.740 | 40.721 | 1.00 | 44.07 |
|    | ATOM | 2764 | CD  | GLN | A | 363 | 0 | 8.586  | 66.154 | 41.092 | 1.00 | 45.77 |
|    | ATOM | 2765 | OE1 | GLN | A | 363 | 0 | 7.697  | 66.473 | 41.901 | 1.00 | 46.53 |
|    | ATOM | 2766 | NE2 | GLN | A | 363 | 0 | 9.294  | 67.089 | 40.435 | 1.00 | 46.12 |





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|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 2843 | CB  | TYR | A | 375 | 0 | 4.467  | 48.729 | 41.067 | 1.00 | 21.98 |
|    | ATOM | 2844 | CG  | TYR | A | 375 | 0 | 3.042  | 48.217 | 41.226 | 1.00 | 24.04 |
|    | ATOM | 2845 | CD1 | TYR | A | 375 | 0 | 2.398  | 48.261 | 42.445 | 1.00 | 23.57 |
|    | ATOM | 2846 | CD2 | TYR | A | 375 | 0 | 2.339  | 47.760 | 40.115 | 1.00 | 24.92 |
| 5  | ATOM | 2847 | CE1 | TYR | A | 375 | 0 | 1.100  | 47.831 | 42.575 | 1.00 | 25.65 |
|    | ATOM | 2848 | CE2 | TYR | A | 375 | 0 | 1.034  | 47.327 | 40.220 | 1.00 | 25.89 |
|    | ATOM | 2849 | CZ  | TYR | A | 375 | 0 | 0.429  | 47.352 | 41.464 | 1.00 | 26.65 |
|    | ATOM | 2850 | OH  | TYR | A | 375 | 0 | -0.869 | 46.916 | 41.593 | 1.00 | 27.26 |
|    | ATOM | 2851 | N   | GLU | A | 376 | 0 | 6.130  | 51.563 | 41.546 | 1.00 | 22.36 |
| 10 | ATOM | 2852 | CA  | GLU | A | 376 | 0 | 7.403  | 52.214 | 41.718 | 1.00 | 23.62 |
|    | ATOM | 2853 | C   | GLU | A | 376 | 0 | 8.411  | 51.289 | 42.387 | 1.00 | 22.40 |
|    | ATOM | 2854 | O   | GLU | A | 376 | 0 | 8.062  | 50.578 | 43.324 | 1.00 | 21.88 |
|    | ATOM | 2855 | CB  | GLU | A | 376 | 0 | 7.211  | 53.465 | 42.614 | 1.00 | 25.13 |
|    | ATOM | 2856 | CG  | GLU | A | 376 | 0 | 8.500  | 54.255 | 42.720 | 1.00 | 27.91 |
|    | ATOM | 2857 | CD  | GLU | A | 376 | 0 | 8.376  | 55.725 | 43.046 | 1.00 | 29.20 |
|    | ATOM | 2858 | OE1 | GLU | A | 376 | 0 | 7.247  | 56.268 | 43.109 | 1.00 | 30.01 |
|    | ATOM | 2859 | OE2 | GLU | A | 376 | 0 | 9.458  | 56.336 | 43.219 | 1.00 | 28.05 |
|    | ATOM | 2860 | N   | LEU | A | 377 | 0 | 9.669  | 51.353 | 41.954 | 1.00 | 21.23 |
|    | ATOM | 2861 | CA  | LEU | A | 377 | 0 | 10.705 | 50.535 | 42.626 | 1.00 | 19.95 |
|    | ATOM | 2862 | C   | LEU | A | 377 | 0 | 11.838 | 51.478 | 42.982 | 1.00 | 20.30 |
|    | ATOM | 2863 | O   | LEU | A | 377 | 0 | 12.220 | 52.350 | 42.197 | 1.00 | 20.12 |
|    | ATOM | 2864 | CB  | LEU | A | 377 | 0 | 11.129 | 49.419 | 41.692 | 1.00 | 20.77 |
|    | ATOM | 2865 | CG  | LEU | A | 377 | 0 | 10.668 | 47.964 | 41.818 | 1.00 | 20.49 |
|    | ATOM | 2866 | CD1 | LEU | A | 377 | 0 | 9.439  | 47.739 | 42.629 | 1.00 | 17.77 |
|    | ATOM | 2867 | CD2 | LEU | A | 377 | 0 | 10.617 | 47.242 | 40.483 | 1.00 | 19.28 |
|    | ATOM | 2868 | N   | PRO | A | 378 | 0 | 12.407 | 51.334 | 44.162 | 1.00 | 19.69 |
|    | ATOM | 2869 | CA  | PRO | A | 378 | 0 | 13.523 | 52.117 | 44.631 | 1.00 | 19.91 |
|    | ATOM | 2870 | C   | PRO | A | 378 | 0 | 14.797 | 51.650 | 43.937 | 1.00 | 19.81 |
|    | ATOM | 2871 | O   | PRO | A | 378 | 0 | 14.795 | 50.645 | 43.241 | 1.00 | 17.74 |
| 30 | ATOM | 2872 | CB  | PRO | A | 378 | 0 | 13.611 | 51.893 | 46.157 | 1.00 | 20.21 |
|    | ATOM | 2873 | CG  | PRO | A | 378 | 0 | 12.957 | 50.546 | 46.291 | 1.00 | 20.73 |
|    | ATOM | 2874 | CD  | PRO | A | 378 | 0 | 12.050 | 50.292 | 45.114 | 1.00 | 19.74 |
|    | ATOM | 2875 | N   | ARG | A | 379 | 0 | 15.877 | 52.410 | 44.059 | 1.00 | 19.68 |
|    | ATOM | 2876 | CA  | ARG | A | 379 | 0 | 17.172 | 52.135 | 43.449 | 1.00 | 18.58 |
| 35 | ATOM | 2877 | C   | ARG | A | 379 | 0 | 18.027 | 51.129 | 44.193 | 1.00 | 18.68 |
|    | ATOM | 2878 | O   | ARG | A | 379 | 0 | 18.151 | 51.126 | 45.432 | 1.00 | 17.60 |
|    | ATOM | 2879 | CB  | ARG | A | 379 | 0 | 17.946 | 53.487 | 43.431 | 1.00 | 18.33 |
|    | ATOM | 2880 | CG  | ARG | A | 379 | 0 | 19.406 | 53.348 | 43.030 | 1.00 | 19.33 |

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|     |      |      |     |     |   |     |   |        |        |        |      |       |
|-----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|     | ATOM | 2881 | CD  | ARG | A | 379 | 0 | 20.026 | 54.710 | 42.729 | 1.00 | 19.06 |
|     | ATOM | 2882 | NE  | ARG | A | 379 | 0 | 21.413 | 54.561 | 42.295 | 1.00 | 16.65 |
|     | ATOM | 2883 | CZ  | ARG | A | 379 | 0 | 21.794 | 54.681 | 41.031 | 1.00 | 15.60 |
|     | ATOM | 2884 | NH1 | ARG | A | 379 | 0 | 20.964 | 54.904 | 40.038 | 1.00 | 14.29 |
| 5   | ATOM | 2885 | NH2 | ARG | A | 379 | 0 | 23.096 | 54.505 | 40.783 | 1.00 | 17.29 |
|     | ATOM | 2886 | N   | ASN | A | 380 | 0 | 18.701 | 50.263 | 43.441 | 1.00 | 20.11 |
|     | ATOM | 2887 | CA  | ASN | A | 380 | 0 | 19.658 | 49.328 | 44.011 | 1.00 | 21.97 |
|     | ATOM | 2888 | C   | ASN | A | 380 | 0 | 19.129 | 48.604 | 45.227 | 1.00 | 22.44 |
|     | ATOM | 2889 | O   | ASN | A | 380 | 0 | 19.712 | 48.630 | 46.317 | 1.00 | 22.53 |
| 10  | ATOM | 2890 | CB  | ASN | A | 380 | 0 | 20.995 | 50.045 | 44.345 | 1.00 | 23.30 |
|     | ATOM | 2891 | CG  | ASN | A | 380 | 0 | 21.860 | 50.231 | 43.107 | 1.00 | 25.83 |
|     | ATOM | 2892 | OD1 | ASN | A | 380 | 0 | 22.636 | 51.186 | 42.877 | 1.00 | 27.14 |
|     | ATOM | 2893 | ND2 | ASN | A | 380 | 0 | 21.767 | 49.271 | 42.185 | 1.00 | 24.91 |
|     | ATOM | 2894 | N   | GLN | A | 381 | 0 | 17.974 | 47.936 | 45.097 | 1.00 | 21.39 |
| 45  | ATOM | 2895 | CA  | GLN | A | 381 | 0 | 17.468 | 47.162 | 46.220 | 1.00 | 20.88 |
|     | ATOM | 2896 | C   | GLN | A | 381 | 0 | 17.169 | 45.760 | 45.679 | 1.00 | 19.96 |
|     | ATOM | 2897 | O   | GLN | A | 381 | 0 | 17.000 | 45.635 | 44.471 | 1.00 | 19.90 |
|     | ATOM | 2898 | CB  | GLN | A | 381 | 0 | 16.219 | 47.722 | 46.871 | 1.00 | 22.84 |
|     | ATOM | 2899 | CG  | GLN | A | 381 | 0 | 16.326 | 49.172 | 47.318 | 1.00 | 27.28 |
| 20  | ATOM | 2900 | CD  | GLN | A | 381 | 0 | 16.065 | 49.297 | 48.792 | 1.00 | 30.24 |
|     | ATOM | 2901 | OE1 | GLN | A | 381 | 0 | 15.067 | 49.917 | 49.171 | 1.00 | 34.48 |
|     | ATOM | 2902 | NE2 | GLN | A | 381 | 0 | 16.929 | 48.742 | 49.611 | 1.00 | 30.80 |
|     | ATOM | 2903 | N   | VAL | A | 382 | 0 | 17.046 | 44.825 | 46.594 | 1.00 | 18.67 |
|     | ATOM | 2904 | CA  | VAL | A | 382 | 0 | 16.665 | 43.472 | 46.248 | 1.00 | 18.98 |
| 125 | ATOM | 2905 | C   | VAL | A | 382 | 0 | 15.139 | 43.327 | 46.212 | 1.00 | 19.75 |
|     | ATOM | 2906 | O   | VAL | A | 382 | 0 | 14.443 | 43.550 | 47.225 | 1.00 | 18.76 |
|     | ATOM | 2907 | CB  | VAL | A | 382 | 0 | 17.252 | 42.491 | 47.278 | 1.00 | 19.03 |
|     | ATOM | 2908 | CG1 | VAL | A | 382 | 0 | 16.811 | 41.065 | 46.960 | 1.00 | 18.87 |
|     | ATOM | 2909 | CG2 | VAL | A | 382 | 0 | 18.779 | 42.637 | 47.344 | 1.00 | 17.54 |
| 30  | ATOM | 2910 | N   | VAL | A | 383 | 0 | 14.601 | 42.954 | 45.046 | 1.00 | 17.58 |
|     | ATOM | 2911 | CA  | VAL | A | 383 | 0 | 13.151 | 42.715 | 45.037 | 1.00 | 17.76 |
|     | ATOM | 2912 | C   | VAL | A | 383 | 0 | 12.777 | 41.254 | 44.883 | 1.00 | 17.50 |
|     | ATOM | 2913 | O   | VAL | A | 383 | 0 | 13.348 | 40.472 | 44.153 | 1.00 | 16.42 |
|     | ATOM | 2914 | CB  | VAL | A | 383 | 0 | 12.306 | 43.626 | 44.145 | 1.00 | 17.69 |
| 35  | ATOM | 2915 | CG1 | VAL | A | 383 | 0 | 13.111 | 44.759 | 43.585 | 1.00 | 15.33 |
|     | ATOM | 2916 | CG2 | VAL | A | 383 | 0 | 11.400 | 43.009 | 43.126 | 1.00 | 17.79 |
|     | ATOM | 2917 | N   | GLU | A | 384 | 0 | 11.743 | 40.861 | 45.638 | 1.00 | 18.47 |
|     | ATOM | 2918 | CA  | GLU | A | 384 | 0 | 11.173 | 39.529 | 45.542 | 1.00 | 18.27 |

|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 2919 | C   | GLU | A | 384 | 0 | 9.711  | 39.683 | 45.096 | 1.00 | 18.94 |
|    | ATOM | 2920 | O   | GLU | A | 384 | 0 | 8.956  | 40.311 | 45.816 | 1.00 | 19.06 |
|    | ATOM | 2921 | CB  | GLU | A | 384 | 0 | 11.253 | 38.764 | 46.852 | 1.00 | 17.12 |
|    | ATOM | 2922 | CG  | GLU | A | 384 | 0 | 10.717 | 37.345 | 46.738 | 1.00 | 17.52 |
| 5  | ATOM | 2923 | CD  | GLU | A | 384 | 0 | 10.979 | 36.551 | 47.998 | 1.00 | 19.10 |
|    | ATOM | 2924 | OE1 | GLU | A | 384 | 0 | 12.101 | 36.050 | 48.218 | 1.00 | 20.69 |
|    | ATOM | 2925 | OE2 | GLU | A | 384 | 0 | 10.018 | 36.405 | 48.773 | 1.00 | 21.22 |
|    | ATOM | 2926 | N   | LEU | A | 385 | 0 | 9.326  | 39.182 | 43.948 | 1.00 | 19.78 |
|    | ATOM | 2927 | CA  | LEU | A | 385 | 0 | 7.966  | 39.153 | 43.463 | 1.00 | 21.07 |
| 10 | ATOM | 2928 | C   | LEU | A | 385 | 0 | 7.391  | 37.738 | 43.591 | 1.00 | 20.91 |
|    | ATOM | 2929 | O   | LEU | A | 385 | 0 | 8.043  | 36.790 | 43.113 | 1.00 | 21.40 |
|    | ATOM | 2930 | CB  | LEU | A | 385 | 0 | 7.881  | 39.466 | 41.959 | 1.00 | 20.92 |
|    | ATOM | 2931 | CG  | LEU | A | 385 | 0 | 8.393  | 40.795 | 41.457 | 1.00 | 23.75 |
|    | ATOM | 2932 | CD1 | LEU | A | 385 | 0 | 8.118  | 40.984 | 39.962 | 1.00 | 23.01 |
|    | ATOM | 2933 | CD2 | LEU | A | 385 | 0 | 7.827  | 41.977 | 42.244 | 1.00 | 22.40 |
|    | ATOM | 2934 | N   | VAL | A | 386 | 0 | 6.182  | 37.574 | 44.099 | 1.00 | 20.91 |
|    | ATOM | 2935 | CA  | VAL | A | 386 | 0 | 5.510  | 36.274 | 44.189 | 1.00 | 19.03 |
|    | ATOM | 2936 | C   | VAL | A | 386 | 0 | 4.228  | 36.334 | 43.356 | 1.00 | 21.11 |
|    | ATOM | 2937 | O   | VAL | A | 386 | 0 | 3.465  | 37.326 | 43.516 | 1.00 | 20.56 |
| 20 | ATOM | 2938 | CB  | VAL | A | 386 | 0 | 5.159  | 35.967 | 45.654 | 1.00 | 20.91 |
|    | ATOM | 2939 | CG1 | VAL | A | 386 | 0 | 4.518  | 34.575 | 45.739 | 1.00 | 20.40 |
|    | ATOM | 2940 | CG2 | VAL | A | 386 | 0 | 6.321  | 36.044 | 46.625 | 1.00 | 19.89 |
|    | ATOM | 2941 | N   | VAL | A | 387 | 0 | 4.011  | 35.469 | 42.358 | 1.00 | 20.02 |
|    | ATOM | 2942 | CA  | VAL | A | 387 | 0 | 2.817  | 35.515 | 41.491 | 1.00 | 20.83 |
| 25 | ATOM | 2943 | C   | VAL | A | 387 | 0 | 2.119  | 34.152 | 41.385 | 1.00 | 21.15 |
|    | ATOM | 2944 | O   | VAL | A | 387 | 0 | 2.369  | 33.285 | 40.528 | 1.00 | 19.97 |
|    | ATOM | 2945 | CB  | VAL | A | 387 | 0 | 3.163  | 36.076 | 40.104 | 1.00 | 20.91 |
|    | ATOM | 2946 | CG1 | VAL | A | 387 | 0 | 1.917  | 36.472 | 39.297 | 1.00 | 22.49 |
|    | ATOM | 2947 | CG2 | VAL | A | 387 | 0 | 3.959  | 37.393 | 40.171 | 1.00 | 22.24 |
| 30 | ATOM | 2948 | N   | PRO | A | 388 | 0 | 1.262  | 33.832 | 42.358 | 1.00 | 20.55 |
|    | ATOM | 2949 | CA  | PRO | A | 388 | 0 | 0.570  | 32.548 | 42.483 | 1.00 | 20.93 |
|    | ATOM | 2950 | C   | PRO | A | 388 | 0 | -0.271 | 32.226 | 41.264 | 1.00 | 20.76 |
|    | ATOM | 2951 | O   | PRO | A | 388 | 0 | -0.928 | 33.118 | 40.715 | 1.00 | 19.53 |
|    | ATOM | 2952 | CB  | PRO | A | 388 | 0 | -0.310 | 32.559 | 43.757 | 1.00 | 20.54 |
| 35 | ATOM | 2953 | CG  | PRO | A | 388 | 0 | 0.280  | 33.766 | 44.482 | 1.00 | 21.86 |
|    | ATOM | 2954 | CD  | PRO | A | 388 | 0 | 0.841  | 34.707 | 43.438 | 1.00 | 20.83 |
|    | ATOM | 2955 | N   | ALA | A | 389 | 0 | -0.160 | 30.986 | 40.807 | 1.00 | 21.68 |
|    | ATOM | 2956 | CA  | ALA | A | 389 | 0 | -0.983 | 30.617 | 39.640 | 1.00 | 24.20 |

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|    |      |      |     |           |   |         |        |        |      |       |
|----|------|------|-----|-----------|---|---------|--------|--------|------|-------|
|    | ATOM | 2957 | C   | ALA A 389 | 0 | -2.394  | 30.320 | 40.148 | 1.00 | 25.02 |
|    | ATOM | 2958 | O   | ALA A 389 | 0 | -2.619  | 30.162 | 41.350 | 1.00 | 24.19 |
|    | ATOM | 2959 | CB  | ALA A 389 | 0 | -0.383  | 29.403 | 38.968 | 1.00 | 23.67 |
|    | ATOM | 2960 | N   | GLY A 390 | 0 | -3.309  | 30.143 | 39.222 | 1.00 | 28.43 |
| 5  | ATOM | 2961 | CA  | GLY A 390 | 0 | -4.713  | 29.811 | 39.539 | 1.00 | 28.47 |
|    | ATOM | 2962 | C   | GLY A 390 | 0 | -5.624  | 30.325 | 38.431 | 1.00 | 28.63 |
|    | ATOM | 2963 | O   | GLY A 390 | 0 | -6.512  | 29.630 | 37.937 | 1.00 | 31.26 |
|    | ATOM | 2964 | N   | VAL A 391 | 0 | -5.402  | 31.531 | 37.961 | 1.00 | 27.11 |
|    | ATOM | 2965 | CA  | VAL A 391 | 0 | -6.234  | 32.164 | 36.962 | 1.00 | 26.51 |
| 10 | ATOM | 2966 | C   | VAL A 391 | 0 | -6.246  | 31.377 | 35.666 | 1.00 | 29.59 |
|    | ATOM | 2967 | O   | VAL A 391 | 0 | -5.274  | 30.775 | 35.181 | 1.00 | 30.61 |
|    | ATOM | 2968 | CB  | VAL A 391 | 0 | -5.835  | 33.634 | 36.788 | 1.00 | 25.83 |
|    | ATOM | 2969 | CG1 | VAL A 391 | 0 | -4.584  | 33.787 | 35.937 | 1.00 | 24.18 |
|    | ATOM | 2970 | CG2 | VAL A 391 | 0 | -7.017  | 34.419 | 36.219 | 1.00 | 24.11 |
|    | ATOM | 2971 | N   | LEU A 392 | 0 | -7.439  | 31.392 | 35.058 | 1.00 | 30.83 |
|    | ATOM | 2972 | CA  | LEU A 392 | 0 | -7.705  | 30.604 | 33.867 | 1.00 | 30.29 |
|    | ATOM | 2973 | C   | LEU A 392 | 0 | -6.809  | 31.004 | 32.710 | 1.00 | 27.38 |
|    | ATOM | 2974 | O   | LEU A 392 | 0 | -6.316  | 32.113 | 32.665 | 1.00 | 24.62 |
|    | ATOM | 2975 | CB  | LEU A 392 | 0 | -9.173  | 30.726 | 33.436 | 1.00 | 32.58 |
|    | ATOM | 2976 | CG  | LEU A 392 | 0 | -9.711  | 32.126 | 33.189 | 1.00 | 33.97 |
|    | ATOM | 2977 | CD1 | LEU A 392 | 0 | -9.411  | 32.626 | 31.786 | 1.00 | 34.78 |
|    | ATOM | 2978 | CD2 | LEU A 392 | 0 | -11.225 | 32.122 | 33.463 | 1.00 | 36.03 |
|    | ATOM | 2979 | N   | GLY A 393 | 0 | -6.725  | 30.074 | 31.754 | 1.00 | 26.24 |
|    | ATOM | 2980 | CA  | GLY A 393 | 0 | -5.936  | 30.302 | 30.554 | 1.00 | 25.54 |
|    | ATOM | 2981 | C   | GLY A 393 | 0 | -4.458  | 29.994 | 30.710 | 1.00 | 25.81 |
|    | ATOM | 2982 | O   | GLY A 393 | 0 | -3.686  | 30.361 | 29.820 | 1.00 | 26.67 |
|    | ATOM | 2983 | N   | GLY A 394 | 0 | -4.033  | 29.379 | 31.803 | 1.00 | 25.84 |
|    | ATOM | 2984 | CA  | GLY A 394 | 0 | -2.615  | 29.112 | 32.035 | 1.00 | 25.94 |
|    | ATOM | 2985 | C   | GLY A 394 | 0 | -2.140  | 27.844 | 31.348 | 1.00 | 26.00 |
| 30 | ATOM | 2986 | O   | GLY A 394 | 0 | -2.884  | 27.193 | 30.625 | 1.00 | 25.18 |
|    | ATOM | 2987 | N   | PRO A 395 | 0 | -0.860  | 27.527 | 31.517 | 1.00 | 24.26 |
|    | ATOM | 2988 | CA  | PRO A 395 | 0 | 0.051   | 28.258 | 32.364 | 1.00 | 21.79 |
|    | ATOM | 2989 | C   | PRO A 395 | 0 | 0.517   | 29.518 | 31.660 | 1.00 | 19.29 |
|    | ATOM | 2990 | O   | PRO A 395 | 0 | 0.704   | 29.597 | 30.445 | 1.00 | 17.41 |
| 35 | ATOM | 2991 | CB  | PRO A 395 | 0 | 1.159   | 27.279 | 32.794 | 1.00 | 22.52 |
|    | ATOM | 2992 | CG  | PRO A 395 | 0 | 1.062   | 26.223 | 31.758 | 1.00 | 24.35 |
|    | ATOM | 2993 | CD  | PRO A 395 | 0 | -0.241  | 26.312 | 30.973 | 1.00 | 24.87 |
|    | ATOM | 2994 | N   | HIS A 396 | 0 | 0.586   | 30.591 | 32.451 | 1.00 | 16.97 |



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|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 2995 | CA  | HIS | A | 396 | 0 | 0.970  | 31.917 | 31.980 | 1.00 | 15.05 |
|    | ATOM | 2996 | C   | HIS | A | 396 | 0 | 2.477  | 32.137 | 32.186 | 1.00 | 15.41 |
|    | ATOM | 2997 | O   | HIS | A | 396 | 0 | 3.039  | 32.025 | 33.275 | 1.00 | 14.21 |
|    | ATOM | 2998 | CB  | HIS | A | 396 | 0 | 0.288  | 32.989 | 32.842 | 1.00 | 15.40 |
| 5  | ATOM | 2999 | CG  | HIS | A | 396 | 0 | -1.224 | 32.924 | 32.737 | 1.00 | 18.23 |
|    | ATOM | 3000 | ND1 | HIS | A | 396 | 0 | -1.942 | 33.504 | 31.702 | 1.00 | 16.23 |
|    | ATOM | 3001 | CD2 | HIS | A | 396 | 0 | -2.109 | 32.319 | 33.557 | 1.00 | 17.00 |
|    | ATOM | 3002 | CE1 | HIS | A | 396 | 0 | -3.218 | 33.262 | 31.906 | 1.00 | 18.22 |
|    | ATOM | 3003 | NE2 | HIS | A | 396 | 0 | -3.343 | 32.526 | 33.014 | 1.00 | 19.08 |
| 10 | ATOM | 3004 | N   | PRO | A | 397 | 0 | 3.143  | 32.403 | 31.090 | 1.00 | 14.69 |
|    | ATOM | 3005 | CA  | PRO | A | 397 | 0 | 4.593  | 32.617 | 31.080 | 1.00 | 16.91 |
|    | ATOM | 3006 | C   | PRO | A | 397 | 0 | 4.818  | 34.129 | 31.202 | 1.00 | 17.59 |
|    | ATOM | 3007 | O   | PRO | A | 397 | 0 | 4.524  | 34.843 | 30.235 | 1.00 | 17.59 |
|    | ATOM | 3008 | CB  | PRO | A | 397 | 0 | 5.076  | 32.040 | 29.757 | 1.00 | 16.63 |
|    | ATOM | 3009 | CG  | PRO | A | 397 | 0 | 3.785  | 31.844 | 28.978 | 1.00 | 17.83 |
|    | ATOM | 3010 | CD  | PRO | A | 397 | 0 | 2.620  | 32.464 | 29.736 | 1.00 | 14.36 |
|    | ATOM | 3011 | N   | PHE | A | 398 | 0 | 5.242  | 34.590 | 32.377 | 1.00 | 16.39 |
|    | ATOM | 3012 | CA  | PHE | A | 398 | 0 | 5.462  | 36.019 | 32.529 | 1.00 | 15.95 |
|    | ATOM | 3013 | C   | PHE | A | 398 | 0 | 6.906  | 36.365 | 32.168 | 1.00 | 15.74 |
|    | ATOM | 3014 | O   | PHE | A | 398 | 0 | 7.846  | 35.619 | 32.444 | 1.00 | 15.78 |
|    | ATOM | 3015 | CB  | PHE | A | 398 | 0 | 5.173  | 36.455 | 33.963 | 1.00 | 17.20 |
|    | ATOM | 3016 | CG  | PHE | A | 398 | 0 | 3.817  | 37.073 | 34.169 | 1.00 | 19.23 |
|    | ATOM | 3017 | CD1 | PHE | A | 398 | 0 | 2.673  | 36.299 | 34.005 | 1.00 | 19.58 |
|    | ATOM | 3018 | CD2 | PHE | A | 398 | 0 | 3.688  | 38.403 | 34.537 | 1.00 | 19.42 |
| 25 | ATOM | 3019 | CE1 | PHE | A | 398 | 0 | 1.409  | 36.832 | 34.198 | 1.00 | 19.83 |
|    | ATOM | 3020 | CE2 | PHE | A | 398 | 0 | 2.405  | 38.933 | 34.709 | 1.00 | 21.46 |
|    | ATOM | 3021 | CZ  | PHE | A | 398 | 0 | 1.260  | 38.162 | 34.539 | 1.00 | 19.65 |
|    | ATOM | 3022 | N   | HIS | A | 399 | 0 | 7.080  | 37.562 | 31.640 | 1.00 | 14.77 |
|    | ATOM | 3023 | CA  | HIS | A | 399 | 0 | 8.374  | 38.089 | 31.333 | 1.00 | 14.75 |
| 30 | ATOM | 3024 | C   | HIS | A | 399 | 0 | 8.580  | 39.496 | 31.872 | 1.00 | 17.67 |
|    | ATOM | 3025 | O   | HIS | A | 399 | 0 | 7.635  | 40.308 | 31.925 | 1.00 | 18.29 |
|    | ATOM | 3026 | CB  | HIS | A | 399 | 0 | 8.582  | 37.968 | 29.861 | 1.00 | 14.01 |
|    | ATOM | 3027 | CG  | HIS | A | 399 | 0 | 8.747  | 39.105 | 28.962 | 1.00 | 16.26 |
|    | ATOM | 3028 | ND1 | HIS | A | 399 | 0 | 9.957  | 39.511 | 28.446 | 1.00 | 15.35 |
| 35 | ATOM | 3029 | CD2 | HIS | A | 399 | 0 | 7.788  | 39.903 | 28.386 | 1.00 | 17.58 |
|    | ATOM | 3030 | CE1 | HIS | A | 399 | 0 | 9.764  | 40.507 | 27.593 | 1.00 | 15.61 |
|    | ATOM | 3031 | NE2 | HIS | A | 399 | 0 | 8.457  | 40.770 | 27.548 | 1.00 | 17.52 |
|    | ATOM | 3032 | N   | LEU | A | 400 | 0 | 9.837  | 39.771 | 32.201 | 1.00 | 15.57 |

|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 3033 | CA  | LEU | A | 400 | 0 | 10.220 | 41.061 | 32.745 | 1.00 | 16.93 |
|    | ATOM | 3034 | C   | LEU | A | 400 | 0 | 11.207 | 41.732 | 31.788 | 1.00 | 16.51 |
|    | ATOM | 3035 | O   | LEU | A | 400 | 0 | 12.268 | 41.175 | 31.510 | 1.00 | 15.77 |
|    | ATOM | 3036 | CB  | LEU | A | 400 | 0 | 10.913 | 40.825 | 34.084 | 1.00 | 18.17 |
| 5  | ATOM | 3037 | CG  | LEU | A | 400 | 0 | 10.877 | 41.741 | 35.288 | 1.00 | 21.27 |
|    | ATOM | 3038 | CD1 | LEU | A | 400 | 0 | 12.130 | 41.638 | 36.151 | 1.00 | 19.27 |
|    | ATOM | 3039 | CD2 | LEU | A | 400 | 0 | 10.536 | 43.166 | 34.926 | 1.00 | 19.86 |
|    | ATOM | 3040 | N   | HIS | A | 401 | 0 | 10.945 | 42.916 | 31.321 | 1.00 | 14.34 |
|    | ATOM | 3041 | CA  | HIS | A | 401 | 0 | 11.830 | 43.707 | 30.508 | 1.00 | 16.06 |
| 10 | ATOM | 3042 | C   | HIS | A | 401 | 0 | 12.924 | 44.300 | 31.428 | 1.00 | 16.15 |
|    | ATOM | 3043 | O   | HIS | A | 401 | 0 | 12.644 | 44.543 | 32.600 | 1.00 | 13.61 |
|    | ATOM | 3044 | CB  | HIS | A | 401 | 0 | 11.105 | 44.884 | 29.843 | 1.00 | 13.27 |
|    | ATOM | 3045 | CG  | HIS | A | 401 | 0 | 10.184 | 44.441 | 28.751 | 1.00 | 14.50 |
|    | ATOM | 3046 | ND1 | HIS | A | 401 | 0 | 10.201 | 44.973 | 27.479 | 1.00 | 14.96 |
|    | ATOM | 3047 | CD2 | HIS | A | 401 | 0 | 9.202  | 43.492 | 28.750 | 1.00 | 12.35 |
|    | ATOM | 3048 | CE1 | HIS | A | 401 | 0 | 9.263  | 44.387 | 26.725 | 1.00 | 12.61 |
|    | ATOM | 3049 | NE2 | HIS | A | 401 | 0 | 8.677  | 43.507 | 27.492 | 1.00 | 12.41 |
|    | ATOM | 3050 | N   | GLY | A | 402 | 0 | 14.103 | 44.549 | 30.855 | 1.00 | 15.59 |
|    | ATOM | 3051 | CA  | GLY | A | 402 | 0 | 15.152 | 45.209 | 31.598 | 1.00 | 15.18 |
|    | ATOM | 3052 | C   | GLY | A | 402 | 0 | 16.009 | 44.351 | 32.510 | 1.00 | 15.96 |
|    | ATOM | 3053 | O   | GLY | A | 402 | 0 | 16.927 | 44.898 | 33.170 | 1.00 | 16.30 |
|    | ATOM | 3054 | N   | HIS | A | 403 | 0 | 15.618 | 43.147 | 32.893 | 1.00 | 12.96 |
|    | ATOM | 3055 | CA  | HIS | A | 403 | 0 | 16.282 | 42.337 | 33.873 | 1.00 | 15.00 |
|    | ATOM | 3056 | C   | HIS | A | 403 | 0 | 16.226 | 40.839 | 33.586 | 1.00 | 15.22 |
|    | ATOM | 3057 | O   | HIS | A | 403 | 0 | 15.253 | 40.381 | 32.971 | 1.00 | 16.16 |
|    | ATOM | 3058 | CB  | HIS | A | 403 | 0 | 15.525 | 42.478 | 35.227 | 1.00 | 14.13 |
|    | ATOM | 3059 | CG  | HIS | A | 403 | 0 | 15.571 | 43.829 | 35.827 | 1.00 | 16.69 |
|    | ATOM | 3060 | ND1 | HIS | A | 403 | 0 | 16.604 | 44.253 | 36.649 | 1.00 | 16.13 |
|    | ATOM | 3061 | CD2 | HIS | A | 403 | 0 | 14.744 | 44.911 | 35.659 | 1.00 | 15.50 |
| 30 | ATOM | 3062 | CE1 | HIS | A | 403 | 0 | 16.425 | 45.520 | 37.002 | 1.00 | 15.02 |
|    | ATOM | 3063 | NE2 | HIS | A | 403 | 0 | 15.285 | 45.905 | 36.430 | 1.00 | 16.15 |
|    | ATOM | 3064 | N   | ALA | A | 404 | 0 | 17.138 | 40.054 | 34.113 | 1.00 | 13.71 |
|    | ATOM | 3065 | CA  | ALA | A | 404 | 0 | 17.039 | 38.607 | 34.158 | 1.00 | 12.60 |
|    | ATOM | 3066 | C   | ALA | A | 404 | 0 | 16.771 | 38.370 | 35.649 | 1.00 | 12.31 |
| 35 | ATOM | 3067 | O   | ALA | A | 404 | 0 | 17.156 | 39.291 | 36.373 | 1.00 | 13.94 |
|    | ATOM | 3068 | CB  | ALA | A | 404 | 0 | 18.249 | 37.819 | 33.721 | 1.00 | 13.84 |
|    | ATOM | 3069 | N   | PHE | A | 405 | 0 | 16.085 | 37.356 | 36.126 | 1.00 | 12.21 |
|    | ATOM | 3070 | CA  | PHE | A | 405 | 0 | 15.813 | 37.235 | 37.559 | 1.00 | 11.64 |

|    |      |      |     |           |   |        |        |        |      |       |
|----|------|------|-----|-----------|---|--------|--------|--------|------|-------|
|    | ATOM | 3071 | C   | PHE A 405 | 0 | 16.177 | 35.821 | 38.008 | 1.00 | 12.55 |
|    | ATOM | 3072 | O   | PHE A 405 | 0 | 16.196 | 34.883 | 37.201 | 1.00 | 12.23 |
|    | ATOM | 3073 | CB  | PHE A 405 | 0 | 14.325 | 37.487 | 37.907 | 1.00 | 11.82 |
|    | ATOM | 3074 | CG  | PHE A 405 | 0 | 13.382 | 36.893 | 36.879 | 1.00 | 11.75 |
| 5  | ATOM | 3075 | CD1 | PHE A 405 | 0 | 13.030 | 35.557 | 36.933 | 1.00 | 10.76 |
|    | ATOM | 3076 | CD2 | PHE A 405 | 0 | 12.917 | 37.663 | 35.824 | 1.00 | 11.55 |
|    | ATOM | 3077 | CE1 | PHE A 405 | 0 | 12.189 | 35.002 | 35.978 | 1.00 | 11.52 |
|    | ATOM | 3078 | CE2 | PHE A 405 | 0 | 12.087 | 37.112 | 34.862 | 1.00 | 13.32 |
|    | ATOM | 3079 | CZ  | PHE A 405 | 0 | 11.692 | 35.767 | 34.946 | 1.00 | 11.45 |
| 10 | ATOM | 3080 | N   | SER A 406 | 0 | 16.414 | 35.625 | 39.288 | 1.00 | 12.86 |
|    | ATOM | 3081 | CA  | SER A 406 | 0 | 16.660 | 34.286 | 39.796 | 1.00 | 13.43 |
|    | ATOM | 3082 | C   | SER A 406 | 0 | 15.276 | 33.712 | 40.130 | 1.00 | 13.49 |
|    | ATOM | 3083 | O   | SER A 406 | 0 | 14.518 | 34.375 | 40.847 | 1.00 | 10.13 |
|    | ATOM | 3084 | CB  | SER A 406 | 0 | 17.433 | 34.290 | 41.123 | 1.00 | 13.78 |
| 15 | ATOM | 3085 | OG  | SER A 406 | 0 | 18.708 | 34.834 | 40.938 | 1.00 | 16.72 |
|    | ATOM | 3086 | N   | VAL A 407 | 0 | 15.100 | 32.453 | 39.741 | 1.00 | 14.53 |
|    | ATOM | 3087 | CA  | VAL A 407 | 0 | 13.853 | 31.777 | 40.093 | 1.00 | 13.90 |
|    | ATOM | 3088 | C   | VAL A 407 | 0 | 14.160 | 30.943 | 41.325 | 1.00 | 14.53 |
|    | ATOM | 3089 | O   | VAL A 407 | 0 | 14.513 | 29.753 | 41.262 | 1.00 | 14.62 |
| 20 | ATOM | 3090 | CB  | VAL A 407 | 0 | 13.333 | 30.903 | 38.941 | 1.00 | 16.43 |
|    | ATOM | 3091 | CG1 | VAL A 407 | 0 | 11.969 | 30.317 | 39.341 | 1.00 | 16.69 |
|    | ATOM | 3092 | CG2 | VAL A 407 | 0 | 13.272 | 31.682 | 37.626 | 1.00 | 14.90 |
|    | ATOM | 3093 | N   | VAL A 408 | 0 | 13.971 | 31.544 | 42.485 | 1.00 | 14.32 |
|    | ATOM | 3094 | CA  | VAL A 408 | 0 | 14.173 | 30.947 | 43.780 | 1.00 | 15.47 |
| 25 | ATOM | 3095 | C   | VAL A 408 | 0 | 13.115 | 29.870 | 44.049 | 1.00 | 16.51 |
|    | ATOM | 3096 | O   | VAL A 408 | 0 | 13.387 | 28.927 | 44.812 | 1.00 | 17.39 |
|    | ATOM | 3097 | CB  | VAL A 408 | 0 | 14.280 | 31.967 | 44.932 | 1.00 | 15.75 |
|    | ATOM | 3098 | CG1 | VAL A 408 | 0 | 15.345 | 33.015 | 44.600 | 1.00 | 14.81 |
|    | ATOM | 3099 | CG2 | VAL A 408 | 0 | 12.952 | 32.693 | 45.189 | 1.00 | 15.99 |
| 30 | ATOM | 3100 | N   | ARG A 409 | 0 | 11.972 | 29.940 | 43.387 | 1.00 | 16.28 |
|    | ATOM | 3101 | CA  | ARG A 409 | 0 | 10.960 | 28.900 | 43.570 | 1.00 | 17.67 |
|    | ATOM | 3102 | C   | ARG A 409 | 0 | 10.217 | 28.757 | 42.236 | 1.00 | 17.09 |
|    | ATOM | 3103 | O   | ARG A 409 | 0 | 9.585  | 29.698 | 41.763 | 1.00 | 15.25 |
|    | ATOM | 3104 | CB  | ARG A 409 | 0 | 9.993  | 29.143 | 44.718 | 1.00 | 17.87 |
| 35 | ATOM | 3105 | CG  | ARG A 409 | 0 | 8.796  | 28.188 | 44.663 | 1.00 | 21.12 |
|    | ATOM | 3106 | CD  | ARG A 409 | 0 | 8.008  | 28.181 | 45.945 | 1.00 | 22.10 |
|    | ATOM | 3107 | NE  | ARG A 409 | 0 | 6.801  | 27.370 | 45.955 | 1.00 | 24.80 |
|    | ATOM | 3108 | CZ  | ARG A 409 | 0 | 5.918  | 27.361 | 46.961 | 1.00 | 25.93 |

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|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 3109 | NH1 | ARG | A | 409 | 0 | 4.859  | 26.569 | 46.877 | 1.00 | 27.14 |
|    | ATOM | 3110 | NH2 | ARG | A | 409 | 0 | 6.068  | 28.117 | 48.046 | 1.00 | 25.44 |
|    | ATOM | 3111 | N   | SER | A | 410 | 0 | 10.366 | 27.576 | 41.668 | 1.00 | 16.33 |
|    | ATOM | 3112 | CA  | SER | A | 410 | 0 | 9.802  | 27.245 | 40.373 | 1.00 | 18.33 |
| 5  | ATOM | 3113 | C   | SER | A | 410 | 0 | 8.406  | 26.612 | 40.492 | 1.00 | 18.60 |
|    | ATOM | 3114 | O   | SER | A | 410 | 0 | 7.941  | 26.223 | 41.566 | 1.00 | 16.94 |
|    | ATOM | 3115 | CB  | SER | A | 410 | 0 | 10.724 | 26.199 | 39.705 | 1.00 | 19.51 |
|    | ATOM | 3116 | OG  | SER | A | 410 | 0 | 11.718 | 26.865 | 38.933 | 1.00 | 20.28 |
|    | ATOM | 3117 | N   | ALA | A | 411 | 0 | 7.754  | 26.551 | 39.343 | 1.00 | 18.19 |
| 10 | ATOM | 3118 | CA  | ALA | A | 411 | 0 | 6.458  | 25.899 | 39.231 | 1.00 | 19.76 |
|    | ATOM | 3119 | C   | ALA | A | 411 | 0 | 6.667  | 24.406 | 39.474 | 1.00 | 22.62 |
|    | ATOM | 3120 | O   | ALA | A | 411 | 0 | 7.636  | 23.759 | 39.067 | 1.00 | 20.97 |
|    | ATOM | 3121 | CB  | ALA | A | 411 | 0 | 5.873  | 26.075 | 37.841 | 1.00 | 17.13 |
|    | ATOM | 3122 | N   | GLY | A | 412 | 0 | 5.710  | 23.856 | 40.229 | 1.00 | 26.30 |
| 15 | ATOM | 3123 | CA  | GLY | A | 412 | 0 | 5.714  | 22.442 | 40.558 | 1.00 | 27.05 |
|    | ATOM | 3124 | C   | GLY | A | 412 | 0 | 6.692  | 22.150 | 41.677 | 1.00 | 29.22 |
|    | ATOM | 3125 | O   | GLY | A | 412 | 0 | 6.917  | 20.959 | 41.944 | 1.00 | 32.10 |
|    | ATOM | 3126 | N   | SER | A | 413 | 0 | 7.293  | 23.139 | 42.322 | 1.00 | 28.66 |
|    | ATOM | 3127 | CA  | SER | A | 413 | 0 | 8.223  | 22.871 | 43.400 | 1.00 | 28.58 |
| 20 | ATOM | 3128 | C   | SER | A | 413 | 0 | 7.757  | 23.600 | 44.642 | 1.00 | 29.64 |
|    | ATOM | 3129 | O   | SER | A | 413 | 0 | 7.279  | 24.735 | 44.524 | 1.00 | 30.66 |
|    | ATOM | 3130 | CB  | SER | A | 413 | 0 | 9.610  | 23.407 | 43.015 | 1.00 | 30.12 |
|    | ATOM | 3131 | OG  | SER | A | 413 | 0 | 10.484 | 23.233 | 44.127 | 1.00 | 31.74 |
|    | ATOM | 3132 | N   | SER | A | 414 | 0 | 7.902  | 23.031 | 45.819 | 1.00 | 29.19 |
| 25 | ATOM | 3133 | CA  | SER | A | 414 | 0 | 7.523  | 23.753 | 47.033 | 1.00 | 30.71 |
|    | ATOM | 3134 | C   | SER | A | 414 | 0 | 8.762  | 24.124 | 47.834 | 1.00 | 30.51 |
|    | ATOM | 3135 | O   | SER | A | 414 | 0 | 8.746  | 24.453 | 49.017 | 1.00 | 31.90 |
|    | ATOM | 3136 | CB  | SER | A | 414 | 0 | 6.612  | 22.832 | 47.853 | 1.00 | 31.10 |
|    | ATOM | 3137 | OG  | SER | A | 414 | 0 | 7.438  | 21.764 | 48.299 | 1.00 | 34.24 |
| 30 | ATOM | 3138 | N   | THR | A | 415 | 0 | 9.919  | 24.063 | 47.194 | 1.00 | 30.60 |
|    | ATOM | 3139 | CA  | THR | A | 415 | 0 | 11.194 | 24.336 | 47.860 | 1.00 | 30.60 |
|    | ATOM | 3140 | C   | THR | A | 415 | 0 | 11.819 | 25.614 | 47.291 | 1.00 | 27.71 |
|    | ATOM | 3141 | O   | THR | A | 415 | 0 | 11.582 | 25.998 | 46.137 | 1.00 | 27.49 |
|    | ATOM | 3142 | CB  | THR | A | 415 | 0 | 12.089 | 23.095 | 47.747 | 1.00 | 32.16 |
| 35 | ATOM | 3143 | OG1 | THR | A | 415 | 0 | 13.411 | 23.441 | 47.285 | 1.00 | 35.60 |
|    | ATOM | 3144 | CG2 | THR | A | 415 | 0 | 11.599 | 22.103 | 46.710 | 1.00 | 34.11 |
|    | ATOM | 3145 | N   | TYR | A | 416 | 0 | 12.662 | 26.268 | 48.053 | 1.00 | 24.34 |
|    | ATOM | 3146 | CA  | TYR | A | 416 | 0 | 13.288 | 27.513 | 47.621 | 1.00 | 25.69 |

|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 3147 | C   | TYR | A | 416 | 0 | 14.782 | 27.297 | 47.392 | 1.00 | 24.69 |
|    | ATOM | 3148 | O   | TYR | A | 416 | 0 | 15.364 | 26.603 | 48.211 | 1.00 | 25.96 |
|    | ATOM | 3149 | CB  | TYR | A | 416 | 0 | 13.129 | 28.633 | 48.659 | 1.00 | 23.79 |
|    | ATOM | 3150 | CG  | TYR | A | 416 | 0 | 11.690 | 29.091 | 48.794 | 1.00 | 24.53 |
| 5  | ATOM | 3151 | CD1 | TYR | A | 416 | 0 | 10.789 | 28.387 | 49.596 | 1.00 | 24.14 |
|    | ATOM | 3152 | CD2 | TYR | A | 416 | 0 | 11.230 | 30.219 | 48.131 | 1.00 | 23.99 |
|    | ATOM | 3153 | CE1 | TYR | A | 416 | 0 | 9.474  | 28.799 | 49.713 | 1.00 | 23.70 |
|    | ATOM | 3154 | CE2 | TYR | A | 416 | 0 | 9.922  | 30.641 | 48.248 | 1.00 | 23.96 |
|    | ATOM | 3155 | CZ  | TYR | A | 416 | 0 | 9.050  | 29.929 | 49.054 | 1.00 | 23.73 |
| 10 | ATOM | 3156 | OH  | TYR | A | 416 | 0 | 7.744  | 30.337 | 49.152 | 1.00 | 23.53 |
|    | ATOM | 3157 | N   | ASN | A | 417 | 0 | 15.360 | 27.867 | 46.353 | 1.00 | 22.34 |
|    | ATOM | 3158 | CA  | ASN | A | 417 | 0 | 16.810 | 27.702 | 46.223 | 1.00 | 20.83 |
|    | ATOM | 3159 | C   | ASN | A | 417 | 0 | 17.425 | 29.089 | 46.092 | 1.00 | 20.43 |
|    | ATOM | 3160 | O   | ASN | A | 417 | 0 | 17.247 | 29.761 | 45.082 | 1.00 | 20.00 |
|    | ATOM | 3161 | CB  | ASN | A | 417 | 0 | 17.179 | 26.763 | 45.086 | 1.00 | 19.72 |
|    | ATOM | 3162 | CG  | ASN | A | 417 | 0 | 18.660 | 26.716 | 44.758 | 1.00 | 19.50 |
|    | ATOM | 3163 | OD1 | ASN | A | 417 | 0 | 19.485 | 27.313 | 45.465 | 1.00 | 20.18 |
|    | ATOM | 3164 | ND2 | ASN | A | 417 | 0 | 18.981 | 26.043 | 43.660 | 1.00 | 17.21 |
|    | ATOM | 3165 | N   | PHE | A | 418 | 0 | 18.153 | 29.508 | 47.119 | 1.00 | 20.79 |
|    | ATOM | 3166 | CA  | PHE | A | 418 | 0 | 18.831 | 30.797 | 47.049 | 1.00 | 20.77 |
|    | ATOM | 3167 | C   | PHE | A | 418 | 0 | 20.314 | 30.613 | 46.725 | 1.00 | 20.47 |
|    | ATOM | 3168 | O   | PHE | A | 418 | 0 | 20.973 | 31.618 | 46.517 | 1.00 | 19.47 |
|    | ATOM | 3169 | CB  | PHE | A | 418 | 0 | 18.764 | 31.542 | 48.384 | 1.00 | 20.52 |
|    | ATOM | 3170 | CG  | PHE | A | 418 | 0 | 17.332 | 31.821 | 48.753 | 1.00 | 22.19 |
|    | ATOM | 3171 | CD1 | PHE | A | 418 | 0 | 16.644 | 30.947 | 49.578 | 1.00 | 21.36 |
|    | ATOM | 3172 | CD2 | PHE | A | 418 | 0 | 16.697 | 32.951 | 48.244 | 1.00 | 21.95 |
|    | ATOM | 3173 | CE1 | PHE | A | 418 | 0 | 15.320 | 31.208 | 49.919 | 1.00 | 21.64 |
|    | ATOM | 3174 | CE2 | PHE | A | 418 | 0 | 15.386 | 33.198 | 48.599 | 1.00 | 22.81 |
|    | ATOM | 3175 | CZ  | PHE | A | 418 | 0 | 14.694 | 32.325 | 49.419 | 1.00 | 22.57 |
| 30 | ATOM | 3176 | N   | VAL | A | 419 | 0 | 20.816 | 29.380 | 46.732 | 1.00 | 19.72 |
|    | ATOM | 3177 | CA  | VAL | A | 419 | 0 | 22.272 | 29.235 | 46.564 | 1.00 | 19.96 |
|    | ATOM | 3178 | C   | VAL | A | 419 | 0 | 22.682 | 29.261 | 45.114 | 1.00 | 20.65 |
|    | ATOM | 3179 | O   | VAL | A | 419 | 0 | 23.634 | 29.875 | 44.671 | 1.00 | 21.02 |
|    | ATOM | 3180 | CB  | VAL | A | 419 | 0 | 22.708 | 27.888 | 47.200 | 1.00 | 21.81 |
| 35 | ATOM | 3181 | CG1 | VAL | A | 419 | 0 | 23.954 | 27.291 | 46.588 | 1.00 | 21.97 |
|    | ATOM | 3182 | CG2 | VAL | A | 419 | 0 | 22.885 | 28.098 | 48.713 | 1.00 | 21.55 |
|    | ATOM | 3183 | N   | ASN | A | 420 | 0 | 21.867 | 28.585 | 44.327 | 1.00 | 19.77 |
|    | ATOM | 3184 | CA  | ASN | A | 420 | 0 | 22.076 | 28.232 | 42.967 | 1.00 | 21.81 |

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|    |      |      |     |           |   |        |        |        |      |       |
|----|------|------|-----|-----------|---|--------|--------|--------|------|-------|
|    | ATOM | 3185 | C   | ASN A 420 | 0 | 21.028 | 28.263 | 41.891 | 1.00 | 20.21 |
|    | ATOM | 3186 | O   | ASN A 420 | 0 | 21.046 | 27.407 | 41.004 | 1.00 | 20.13 |
|    | ATOM | 3187 | CB  | ASN A 420 | 0 | 22.166 | 26.587 | 43.207 | 1.00 | 21.91 |
|    | ATOM | 3188 | CG  | ASN A 420 | 0 | 23.441 | 26.231 | 42.529 | 1.00 | 24.12 |
| 5  | ATOM | 3189 | OD1 | ASN A 420 | 0 | 23.933 | 25.113 | 42.403 | 1.00 | 26.75 |
|    | ATOM | 3190 | ND2 | ASN A 420 | 0 | 24.051 | 27.318 | 42.027 | 1.00 | 25.42 |
|    | ATOM | 3191 | N   | PRO A 421 | 0 | 19.987 | 29.034 | 42.038 | 1.00 | 20.27 |
|    | ATOM | 3192 | CA  | PRO A 421 | 0 | 18.808 | 28.951 | 41.183 | 1.00 | 17.57 |
|    | ATOM | 3193 | C   | PRO A 421 | 0 | 19.100 | 29.369 | 39.778 | 1.00 | 15.76 |
| 10 | ATOM | 3194 | O   | PRO A 421 | 0 | 19.907 | 30.281 | 39.586 | 1.00 | 15.13 |
|    | ATOM | 3195 | CB  | PRO A 421 | 0 | 17.769 | 29.850 | 41.894 | 1.00 | 19.52 |
|    | ATOM | 3196 | CG  | PRO A 421 | 0 | 18.674 | 30.863 | 42.589 | 1.00 | 19.88 |
|    | ATOM | 3197 | CD  | PRO A 421 | 0 | 19.847 | 30.057 | 43.095 | 1.00 | 20.45 |
|    | ATOM | 3198 | N   | VAL A 422 | 0 | 18.385 | 28.803 | 38.820 | 1.00 | 15.28 |
|    | ATOM | 3199 | CA  | VAL A 422 | 0 | 18.502 | 29.239 | 37.420 | 1.00 | 13.48 |
|    | ATOM | 3200 | C   | VAL A 422 | 0 | 18.157 | 30.721 | 37.397 | 1.00 | 14.53 |
|    | ATOM | 3201 | O   | VAL A 422 | 0 | 17.340 | 31.208 | 38.183 | 1.00 | 14.44 |
|    | ATOM | 3202 | CB  | VAL A 422 | 0 | 17.498 | 28.435 | 36.585 | 1.00 | 15.23 |
|    | ATOM | 3203 | CG1 | VAL A 422 | 0 | 16.032 | 28.747 | 36.937 | 1.00 | 13.85 |
|    | ATOM | 3204 | CG2 | VAL A 422 | 0 | 17.681 | 28.514 | 35.089 | 1.00 | 13.26 |
|    | ATOM | 3205 | N   | LYS A 423 | 0 | 18.691 | 31.447 | 36.451 | 1.00 | 15.35 |
|    | ATOM | 3206 | CA  | LYS A 423 | 0 | 18.366 | 32.831 | 36.189 | 1.00 | 17.23 |
|    | ATOM | 3207 | C   | LYS A 423 | 0 | 17.759 | 32.891 | 34.784 | 1.00 | 16.55 |
|    | ATOM | 3208 | O   | LYS A 423 | 0 | 18.284 | 32.189 | 33.909 | 1.00 | 16.92 |
| 25 | ATOM | 3209 | CB  | LYS A 423 | 0 | 19.627 | 33.681 | 36.174 | 1.00 | 19.33 |
|    | ATOM | 3210 | CG  | LYS A 423 | 0 | 20.118 | 33.985 | 37.565 | 1.00 | 24.09 |
|    | ATOM | 3211 | CD  | LYS A 423 | 0 | 21.065 | 35.206 | 37.466 | 1.00 | 27.32 |
|    | ATOM | 3212 | CE  | LYS A 423 | 0 | 22.470 | 34.596 | 37.263 | 1.00 | 28.78 |
|    | ATOM | 3213 | NZ  | LYS A 423 | 0 | 23.128 | 34.482 | 38.595 | 1.00 | 29.50 |
| 30 | ATOM | 3214 | N   | ARG A 424 | 0 | 16.630 | 33.570 | 34.617 | 1.00 | 15.85 |
|    | ATOM | 3215 | CA  | ARG A 424 | 0 | 16.016 | 33.592 | 33.294 | 1.00 | 16.20 |
|    | ATOM | 3216 | C   | ARG A 424 | 0 | 15.235 | 34.890 | 33.105 | 1.00 | 14.86 |
|    | ATOM | 3217 | O   | ARG A 424 | 0 | 15.354 | 35.771 | 33.959 | 1.00 | 14.64 |
|    | ATOM | 3218 | CB  | ARG A 424 | 0 | 15.158 | 32.367 | 32.994 | 1.00 | 16.11 |
| 35 | ATOM | 3219 | CG  | ARG A 424 | 0 | 14.036 | 31.864 | 33.849 | 1.00 | 14.06 |
|    | ATOM | 3220 | CD  | ARG A 424 | 0 | 13.447 | 30.506 | 33.427 | 1.00 | 11.65 |
|    | ATOM | 3221 | NE  | ARG A 424 | 0 | 13.422 | 30.395 | 31.961 | 1.00 | 9.03  |
|    | ATOM | 3222 | CZ  | ARG A 424 | 0 | 13.312 | 29.234 | 31.319 | 1.00 | 10.63 |

|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
| 5  | ATOM | 3223 | NH1 | ARG | A | 424 | 0 | 13.185 | 28.133 | 32.082 | 1.00 | 11.02 |
|    | ATOM | 3224 | NH2 | ARG | A | 424 | 0 | 13.403 | 29.213 | 29.988 | 1.00 | 8.52  |
|    | ATOM | 3225 | N   | ASP | A | 425 | 0 | 14.519 | 34.975 | 31.995 | 1.00 | 13.83 |
|    | ATOM | 3226 | CA  | ASP | A | 425 | 0 | 13.751 | 36.209 | 31.752 | 1.00 | 15.00 |
|    | ATOM | 3227 | C   | ASP | A | 425 | 0 | 12.298 | 35.929 | 31.359 | 1.00 | 15.65 |
| 10 | ATOM | 3228 | O   | ASP | A | 425 | 0 | 11.474 | 36.850 | 31.271 | 1.00 | 15.11 |
|    | ATOM | 3229 | CB  | ASP | A | 425 | 0 | 14.499 | 37.130 | 30.797 | 1.00 | 12.96 |
|    | ATOM | 3230 | CG  | ASP | A | 425 | 0 | 14.609 | 36.652 | 29.371 | 1.00 | 14.32 |
|    | ATOM | 3231 | OD1 | ASP | A | 425 | 0 | 13.697 | 35.957 | 28.818 | 1.00 | 13.30 |
|    | ATOM | 3232 | OD2 | ASP | A | 425 | 0 | 15.632 | 37.003 | 28.729 | 1.00 | 13.76 |
| 15 | ATOM | 3233 | N   | VAL | A | 426 | 0 | 11.883 | 34.675 | 31.206 | 1.00 | 15.21 |
|    | ATOM | 3234 | CA  | VAL | A | 426 | 0 | 10.530 | 34.229 | 30.984 | 1.00 | 13.92 |
|    | ATOM | 3235 | C   | VAL | A | 426 | 0 | 10.247 | 33.000 | 31.865 | 1.00 | 13.98 |
|    | ATOM | 3236 | O   | VAL | A | 426 | 0 | 10.891 | 31.965 | 31.696 | 1.00 | 15.56 |
|    | ATOM | 3237 | CB  | VAL | A | 426 | 0 | 10.128 | 33.807 | 29.567 | 1.00 | 12.49 |
| 20 | ATOM | 3238 | CG1 | VAL | A | 426 | 0 | 8.629  | 33.473 | 29.531 | 1.00 | 13.99 |
|    | ATOM | 3239 | CG2 | VAL | A | 426 | 0 | 10.390 | 34.874 | 28.536 | 1.00 | 12.37 |
|    | ATOM | 3240 | N   | VAL | A | 427 | 0 | 9.274  | 33.090 | 32.766 | 1.00 | 12.82 |
|    | ATOM | 3241 | CA  | VAL | A | 427 | 0 | 8.979  | 31.969 | 33.639 | 1.00 | 12.27 |
|    | ATOM | 3242 | C   | VAL | A | 427 | 0 | 7.495  | 31.589 | 33.651 | 1.00 | 14.14 |
| 25 | ATOM | 3243 | O   | VAL | A | 427 | 0 | 6.594  | 32.426 | 33.682 | 1.00 | 14.10 |
|    | ATOM | 3244 | CB  | VAL | A | 427 | 0 | 9.458  | 32.315 | 35.056 | 1.00 | 11.46 |
|    | ATOM | 3245 | CG1 | VAL | A | 427 | 0 | 8.732  | 33.549 | 35.594 | 1.00 | 9.39  |
|    | ATOM | 3246 | CG2 | VAL | A | 427 | 0 | 9.353  | 31.116 | 35.982 | 1.00 | 10.53 |
|    | ATOM | 3247 | N   | SER | A | 428 | 0 | 7.229  | 30.282 | 33.622 | 1.00 | 13.74 |
| 30 | ATOM | 3248 | CA  | SER | A | 428 | 0 | 5.889  | 29.766 | 33.721 | 1.00 | 15.16 |
|    | ATOM | 3249 | C   | SER | A | 428 | 0 | 5.445  | 29.878 | 35.171 | 1.00 | 15.48 |
|    | ATOM | 3250 | O   | SER | A | 428 | 0 | 6.186  | 29.505 | 36.087 | 1.00 | 15.38 |
|    | ATOM | 3251 | CB  | SER | A | 428 | 0 | 5.776  | 28.323 | 33.206 | 1.00 | 16.37 |
|    | ATOM | 3252 | OG  | SER | A | 428 | 0 | 4.464  | 27.821 | 33.484 | 1.00 | 17.00 |
| 35 | ATOM | 3253 | N   | LEU | A | 429 | 0 | 4.246  | 30.376 | 35.399 | 1.00 | 15.74 |
|    | ATOM | 3254 | CA  | LEU | A | 429 | 0 | 3.686  | 30.489 | 36.744 | 1.00 | 15.73 |
|    | ATOM | 3255 | C   | LEU | A | 429 | 0 | 3.035  | 29.184 | 37.198 | 1.00 | 16.41 |
|    | ATOM | 3256 | O   | LEU | A | 429 | 0 | 2.741  | 29.041 | 38.390 | 1.00 | 15.74 |
|    | ATOM | 3257 | CB  | LEU | A | 429 | 0 | 2.669  | 31.627 | 36.886 | 1.00 | 14.99 |
| 40 | ATOM | 3258 | CG  | LEU | A | 429 | 0 | 3.155  | 33.027 | 36.540 | 1.00 | 16.60 |
|    | ATOM | 3259 | CD1 | LEU | A | 429 | 0 | 2.043  | 34.042 | 36.862 | 1.00 | 17.78 |
|    | ATOM | 3260 | CD2 | LEU | A | 429 | 0 | 4.438  | 33.386 | 37.281 | 1.00 | 16.26 |

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|    |      |      |     |           |   |        |        |        |      |       |
|----|------|------|-----|-----------|---|--------|--------|--------|------|-------|
|    | ATOM | 3261 | N   | GLY A 430 | 0 | 2.913  | 28.218 | 36.295 | 1.00 | 17.70 |
|    | ATOM | 3262 | CA  | GLY A 430 | 0 | 2.419  | 26.904 | 36.701 | 1.00 | 19.84 |
|    | ATOM | 3263 | C   | GLY A 430 | 0 | 0.894  | 26.836 | 36.778 | 1.00 | 20.72 |
|    | ATOM | 3264 | O   | GLY A 430 | 0 | 0.178  | 27.498 | 36.029 | 1.00 | 20.89 |
| 5  | ATOM | 3265 | N   | VAL A 431 | 0 | 0.428  | 26.056 | 37.729 | 1.00 | 22.04 |
|    | ATOM | 3266 | CA  | VAL A 431 | 0 | -0.956 | 25.713 | 37.966 | 1.00 | 22.61 |
|    | ATOM | 3267 | C   | VAL A 431 | 0 | -1.337 | 26.028 | 39.409 | 1.00 | 23.06 |
|    | ATOM | 3268 | O   | VAL A 431 | 0 | -0.476 | 26.392 | 40.218 | 1.00 | 22.42 |
|    | ATOM | 3269 | CB  | VAL A 431 | 0 | -1.245 | 24.193 | 37.768 | 1.00 | 23.03 |
| 10 | ATOM | 3270 | CG1 | VAL A 431 | 0 | -0.795 | 23.672 | 36.416 | 1.00 | 22.74 |
|    | ATOM | 3271 | CG2 | VAL A 431 | 0 | -0.574 | 23.315 | 38.820 | 1.00 | 22.77 |
|    | ATOM | 3272 | N   | THR A 432 | 0 | -2.615 | 25.835 | 39.704 | 1.00 | 23.88 |
|    | ATOM | 3273 | CA  | THR A 432 | 0 | -3.168 | 26.067 | 41.041 | 1.00 | 24.18 |
|    | ATOM | 3274 | C   | THR A 432 | 0 | -2.324 | 25.401 | 42.092 | 1.00 | 23.94 |
| 15 | ATOM | 3275 | O   | THR A 432 | 0 | -1.915 | 24.249 | 41.909 | 1.00 | 24.69 |
|    | ATOM | 3276 | CB  | THR A 432 | 0 | -4.625 | 25.565 | 41.069 | 1.00 | 25.75 |
|    | ATOM | 3277 | OG1 | THR A 432 | 0 | -5.336 | 26.344 | 40.087 | 1.00 | 25.87 |
|    | ATOM | 3278 | CG2 | THR A 432 | 0 | -5.319 | 25.800 | 42.398 | 1.00 | 26.65 |
|    | ATOM | 3279 | N   | GLY A 433 | 0 | -1.924 | 26.136 | 43.124 | 1.00 | 24.45 |
| 20 | ATOM | 3280 | CA  | GLY A 433 | 0 | -1.035 | 25.589 | 44.159 | 1.00 | 22.27 |
|    | ATOM | 3281 | C   | GLY A 433 | 0 | 0.394  | 26.120 | 43.983 | 1.00 | 23.26 |
|    | ATOM | 3282 | O   | GLY A 433 | 0 | 1.103  | 26.212 | 45.000 | 1.00 | 23.30 |
|    | ATOM | 3283 | N   | ASP A 434 | 0 | 0.833  | 26.481 | 42.776 | 1.00 | 21.12 |
|    | ATOM | 3284 | CA  | ASP A 434 | 0 | 2.192  | 26.986 | 42.586 | 1.00 | 20.62 |
| 25 | ATOM | 3285 | C   | ASP A 434 | 0 | 2.360  | 28.408 | 43.126 | 1.00 | 22.36 |
|    | ATOM | 3286 | O   | ASP A 434 | 0 | 1.425  | 29.225 | 43.076 | 1.00 | 21.24 |
|    | ATOM | 3287 | CB  | ASP A 434 | 0 | 2.548  | 27.024 | 41.087 | 1.00 | 18.78 |
|    | ATOM | 3288 | CG  | ASP A 434 | 0 | 2.827  | 25.616 | 40.597 | 1.00 | 19.71 |
|    | ATOM | 3289 | OD1 | ASP A 434 | 0 | 3.304  | 24.828 | 41.409 | 1.00 | 20.43 |
| 30 | ATOM | 3290 | OD2 | ASP A 434 | 0 | 2.596  | 25.242 | 39.432 | 1.00 | 21.58 |
|    | ATOM | 3291 | N   | GLU A 435 | 0 | 3.585  | 28.721 | 43.562 | 1.00 | 22.08 |
|    | ATOM | 3292 | CA  | GLU A 435 | 0 | 3.853  | 30.077 | 44.068 | 1.00 | 23.24 |
|    | ATOM | 3293 | C   | GLU A 435 | 0 | 5.244  | 30.512 | 43.612 | 1.00 | 20.24 |
|    | ATOM | 3294 | O   | GLU A 435 | 0 | 6.201  | 30.611 | 44.372 | 1.00 | 19.50 |
| 35 | ATOM | 3295 | CB  | GLU A 435 | 0 | 3.659  | 30.068 | 45.572 | 1.00 | 25.56 |
|    | ATOM | 3296 | CG  | GLU A 435 | 0 | 3.739  | 31.409 | 46.258 | 1.00 | 30.52 |
|    | ATOM | 3297 | CD  | GLU A 435 | 0 | 3.107  | 31.350 | 47.657 | 1.00 | 35.00 |
|    | ATOM | 3298 | OE1 | GLU A 435 | 0 | 2.093  | 30.603 | 47.760 | 1.00 | 35.71 |



|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 3299 | OE2 | GLU | A | 435 | 0 | 3.658  | 32.020 | 48.579 | 1.00 | 35.91 |
|    | ATOM | 3300 | N   | VAL | A | 436 | 0 | 5.344  | 30.690 | 42.297 | 1.00 | 17.80 |
|    | ATOM | 3301 | CA  | VAL | A | 436 | 0 | 6.564  | 31.083 | 41.640 | 1.00 | 15.30 |
|    | ATOM | 3302 | C   | VAL | A | 436 | 0 | 7.049  | 32.416 | 42.221 | 1.00 | 17.15 |
| 5  | ATOM | 3303 | O   | VAL | A | 436 | 0 | 6.326  | 33.402 | 42.275 | 1.00 | 17.48 |
|    | ATOM | 3304 | CB  | VAL | A | 436 | 0 | 6.360  | 31.219 | 40.129 | 1.00 | 14.63 |
|    | ATOM | 3305 | CG1 | VAL | A | 436 | 0 | 7.463  | 32.009 | 39.454 | 1.00 | 10.79 |
|    | ATOM | 3306 | CG2 | VAL | A | 436 | 0 | 6.238  | 29.806 | 39.536 | 1.00 | 14.13 |
|    | ATOM | 3307 | N   | THR | A | 437 | 0 | 8.290  | 32.391 | 42.691 | 1.00 | 16.51 |
| 10 | ATOM | 3308 | CA  | THR | A | 437 | 0 | 8.940  | 33.505 | 43.364 | 1.00 | 16.19 |
|    | ATOM | 3309 | C   | THR | A | 437 | 0 | 10.254 | 33.817 | 42.668 | 1.00 | 15.24 |
|    | ATOM | 3310 | O   | THR | A | 437 | 0 | 11.100 | 32.940 | 42.419 | 1.00 | 15.47 |
|    | ATOM | 3311 | CB  | THR | A | 437 | 0 | 9.190  | 33.067 | 44.827 | 1.00 | 14.95 |
|    | ATOM | 3312 | OG1 | THR | A | 437 | 0 | 7.969  | 32.499 | 45.308 | 1.00 | 13.50 |
|    | ATOM | 3313 | CG2 | THR | A | 437 | 0 | 9.599  | 34.232 | 45.697 | 1.00 | 13.41 |
|    | ATOM | 3314 | N   | ILE | A | 438 | 0 | 10.413 | 35.059 | 42.251 | 1.00 | 13.38 |
|    | ATOM | 3315 | CA  | ILE | A | 438 | 0 | 11.597 | 35.471 | 41.510 | 1.00 | 15.78 |
|    | ATOM | 3316 | C   | ILE | A | 438 | 0 | 12.292 | 36.590 | 42.264 | 1.00 | 15.86 |
|    | ATOM | 3317 | O   | ILE | A | 438 | 0 | 11.617 | 37.270 | 43.048 | 1.00 | 17.32 |
|    | ATOM | 3318 | CB  | ILE | A | 438 | 0 | 11.249 | 35.848 | 40.053 | 1.00 | 15.40 |
|    | ATOM | 3319 | CG1 | ILE | A | 438 | 0 | 10.340 | 37.055 | 39.985 | 1.00 | 15.85 |
|    | ATOM | 3320 | CG2 | ILE | A | 438 | 0 | 10.602 | 34.653 | 39.346 | 1.00 | 17.11 |
|    | ATOM | 3321 | CD1 | ILE | A | 438 | 0 | 9.971  | 37.607 | 38.632 | 1.00 | 17.49 |
|    | ATOM | 3322 | N   | ARG | A | 439 | 0 | 13.599 | 36.789 | 42.055 | 1.00 | 16.02 |
|    | ATOM | 3323 | CA  | ARG | A | 439 | 0 | 14.315 | 37.896 | 42.671 | 1.00 | 13.90 |
|    | ATOM | 3324 | C   | ARG | A | 439 | 0 | 15.181 | 38.645 | 41.676 | 1.00 | 13.52 |
|    | ATOM | 3325 | O   | ARG | A | 439 | 0 | 15.748 | 38.056 | 40.762 | 1.00 | 14.74 |
|    | ATOM | 3326 | CB  | ARG | A | 439 | 0 | 15.193 | 37.501 | 43.850 | 1.00 | 15.15 |
|    | ATOM | 3327 | CG  | ARG | A | 439 | 0 | 14.457 | 37.235 | 45.147 | 1.00 | 14.83 |
| 30 | ATOM | 3328 | CD  | ARG | A | 439 | 0 | 15.367 | 37.337 | 46.355 | 1.00 | 14.08 |
|    | ATOM | 3329 | NE  | ARG | A | 439 | 0 | 14.613 | 37.000 | 47.566 | 1.00 | 17.06 |
|    | ATOM | 3330 | CZ  | ARG | A | 439 | 0 | 15.192 | 36.922 | 48.767 | 1.00 | 18.01 |
|    | ATOM | 3331 | NH1 | ARG | A | 439 | 0 | 16.487 | 37.176 | 48.908 | 1.00 | 17.76 |
|    | ATOM | 3332 | NH2 | ARG | A | 439 | 0 | 14.459 | 36.604 | 49.818 | 1.00 | 18.55 |
| 35 | ATOM | 3333 | N   | PHE | A | 440 | 0 | 15.314 | 39.957 | 41.853 | 1.00 | 14.44 |
|    | ATOM | 3334 | CA  | PHE | A | 440 | 0 | 16.204 | 40.737 | 40.993 | 1.00 | 15.97 |
|    | ATOM | 3335 | C   | PHE | A | 440 | 0 | 16.645 | 41.986 | 41.761 | 1.00 | 15.86 |
|    | ATOM | 3336 | O   | PHE | A | 440 | 0 | 16.113 | 42.313 | 42.801 | 1.00 | 15.79 |



|    |      |      |     |           |   |        |        |        |      |       |
|----|------|------|-----|-----------|---|--------|--------|--------|------|-------|
|    | ATOM | 3375 | CA  | PRO A 445 | 0 | 16.683 | 53.137 | 35.938 | 1.00 | 16.56 |
|    | ATOM | 3376 | C   | PRO A 445 | 0 | 15.788 | 53.217 | 34.721 | 1.00 | 16.99 |
|    | ATOM | 3377 | O   | PRO A 445 | 0 | 16.293 | 53.246 | 33.594 | 1.00 | 17.02 |
|    | ATOM | 3378 | CB  | PRO A 445 | 0 | 17.552 | 54.418 | 35.951 | 1.00 | 18.28 |
| 5  | ATOM | 3379 | CG  | PRO A 445 | 0 | 18.870 | 53.871 | 36.474 | 1.00 | 18.09 |
|    | ATOM | 3380 | CD  | PRO A 445 | 0 | 19.002 | 52.409 | 36.084 | 1.00 | 16.05 |
|    | ATOM | 3381 | N   | GLY A 446 | 0 | 14.462 | 53.194 | 34.918 | 1.00 | 17.16 |
|    | ATOM | 3382 | CA  | GLY A 446 | 0 | 13.560 | 53.281 | 33.743 | 1.00 | 15.84 |
|    | ATOM | 3383 | C   | GLY A 446 | 0 | 12.297 | 52.453 | 33.984 | 1.00 | 14.24 |
| 10 | ATOM | 3384 | O   | GLY A 446 | 0 | 12.192 | 51.797 | 35.005 | 1.00 | 12.22 |
|    | ATOM | 3385 | N   | PRO A 447 | 0 | 11.285 | 52.697 | 33.181 | 1.00 | 15.53 |
|    | ATOM | 3386 | CA  | PRO A 447 | 0 | 9.999  | 52.048 | 33.195 | 1.00 | 15.24 |
|    | ATOM | 3387 | C   | PRO A 447 | 0 | 10.101 | 50.737 | 32.401 | 1.00 | 13.82 |
|    | ATOM | 3388 | O   | PRO A 447 | 0 | 10.514 | 50.733 | 31.240 | 1.00 | 13.85 |
| 15 | ATOM | 3389 | CB  | PRO A 447 | 0 | 9.013  | 52.976 | 32.473 | 1.00 | 16.21 |
| 16 | ATOM | 3390 | CG  | PRO A 447 | 0 | 9.933  | 53.729 | 31.554 | 1.00 | 16.19 |
| 17 | ATOM | 3391 | CD  | PRO A 447 | 0 | 11.347 | 53.707 | 32.096 | 1.00 | 17.15 |
| 18 | ATOM | 3392 | N   | TRP A 448 | 0 | 9.787  | 49.623 | 33.021 | 1.00 | 11.83 |
| 19 | ATOM | 3393 | CA  | TRP A 448 | 0 | 9.898  | 48.317 | 32.371 | 1.00 | 14.30 |
| 20 | ATOM | 3394 | C   | TRP A 448 | 0 | 8.610  | 47.493 | 32.427 | 1.00 | 13.12 |
| 21 | ATOM | 3395 | O   | TRP A 448 | 0 | 8.013  | 47.355 | 33.502 | 1.00 | 11.63 |
| 22 | ATOM | 3396 | CB  | TRP A 448 | 0 | 10.985 | 47.483 | 33.095 | 1.00 | 13.17 |
| 23 | ATOM | 3397 | CG  | TRP A 448 | 0 | 12.321 | 48.160 | 33.124 | 1.00 | 14.54 |
| 24 | ATOM | 3398 | CD1 | TRP A 448 | 0 | 12.897 | 48.728 | 34.239 | 1.00 | 14.19 |
| 25 | ATOM | 3399 | CD2 | TRP A 448 | 0 | 13.211 | 48.382 | 32.029 | 1.00 | 14.38 |
|    | ATOM | 3400 | NE1 | TRP A 448 | 0 | 14.083 | 49.290 | 33.873 | 1.00 | 15.02 |
|    | ATOM | 3401 | CE2 | TRP A 448 | 0 | 14.308 | 49.095 | 32.527 | 1.00 | 14.41 |
|    | ATOM | 3402 | CE3 | TRP A 448 | 0 | 13.193 | 48.053 | 30.672 | 1.00 | 15.39 |
|    | ATOM | 3403 | CZ2 | TRP A 448 | 0 | 15.388 | 49.467 | 31.729 | 1.00 | 14.57 |
| 30 | ATOM | 3404 | CZ3 | TRP A 448 | 0 | 14.250 | 48.446 | 29.867 | 1.00 | 14.92 |
|    | ATOM | 3405 | CH2 | TRP A 448 | 0 | 15.355 | 49.135 | 30.399 | 1.00 | 14.93 |
|    | ATOM | 3406 | N   | PHE A 449 | 0 | 8.231  | 46.884 | 31.315 | 1.00 | 14.03 |
|    | ATOM | 3407 | CA  | PHE A 449 | 0 | 7.023  | 46.039 | 31.297 | 1.00 | 13.60 |
|    | ATOM | 3408 | C   | PHE A 449 | 0 | 7.231  | 44.712 | 32.016 | 1.00 | 15.32 |
| 35 | ATOM | 3409 | O   | PHE A 449 | 0 | 8.312  | 44.093 | 31.993 | 1.00 | 13.66 |
|    | ATOM | 3410 | CB  | PHE A 449 | 0 | 6.627  | 45.773 | 29.845 | 1.00 | 16.19 |
|    | ATOM | 3411 | CG  | PHE A 449 | 0 | 5.221  | 46.033 | 29.380 | 1.00 | 18.26 |
|    | ATOM | 3412 | CD1 | PHE A 449 | 0 | 4.165  | 46.288 | 30.226 | 1.00 | 17.95 |

|    |      |      |     |     |   |     |   |       |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|-------|--------|--------|------|-------|
|    | ATOM | 3413 | CD2 | PHE | A | 449 | 0 | 4.962 | 46.027 | 28.011 | 1.00 | 20.73 |
|    | ATOM | 3414 | CE1 | PHE | A | 449 | 0 | 2.899 | 46.565 | 29.745 | 1.00 | 18.55 |
|    | ATOM | 3415 | CE2 | PHE | A | 449 | 0 | 3.701 | 46.293 | 27.503 | 1.00 | 20.13 |
|    | ATOM | 3416 | CZ  | PHE | A | 449 | 0 | 2.664 | 46.543 | 28.387 | 1.00 | 18.59 |
| 5  | ATOM | 3417 | N   | PHE | A | 450 | 0 | 6.195 | 44.245 | 32.715 | 1.00 | 12.79 |
|    | ATOM | 3418 | CA  | PHE | A | 450 | 0 | 6.119 | 42.963 | 33.359 | 1.00 | 14.38 |
|    | ATOM | 3419 | C   | PHE | A | 450 | 0 | 4.775 | 42.323 | 32.952 | 1.00 | 15.45 |
|    | ATOM | 3420 | O   | PHE | A | 450 | 0 | 3.743 | 42.812 | 33.423 | 1.00 | 15.30 |
|    | ATOM | 3421 | CB  | PHE | A | 450 | 0 | 6.186 | 43.041 | 34.879 | 1.00 | 15.06 |
| 10 | ATOM | 3422 | CG  | PHE | A | 450 | 0 | 6.210 | 41.693 | 35.555 | 1.00 | 15.95 |
|    | ATOM | 3423 | CD1 | PHE | A | 450 | 0 | 7.157 | 40.734 | 35.204 | 1.00 | 16.36 |
|    | ATOM | 3424 | CD2 | PHE | A | 450 | 0 | 5.325 | 41.398 | 36.570 | 1.00 | 15.45 |
|    | ATOM | 3425 | CE1 | PHE | A | 450 | 0 | 7.222 | 39.518 | 35.855 | 1.00 | 13.87 |
|    | ATOM | 3426 | CE2 | PHE | A | 450 | 0 | 5.386 | 40.187 | 37.224 | 1.00 | 16.10 |
| 15 | ATOM | 3427 | CZ  | PHE | A | 450 | 0 | 6.317 | 39.236 | 36.854 | 1.00 | 15.90 |
|    | ATOM | 3428 | N   | HIS | A | 451 | 0 | 4.737 | 41.301 | 32.122 | 1.00 | 15.54 |
|    | ATOM | 3429 | CA  | HIS | A | 451 | 0 | 3.443 | 40.841 | 31.610 | 1.00 | 16.24 |
|    | ATOM | 3430 | C   | HIS | A | 451 | 0 | 3.461 | 39.426 | 31.073 | 1.00 | 16.95 |
|    | ATOM | 3431 | O   | HIS | A | 451 | 0 | 4.526 | 38.860 | 30.812 | 1.00 | 17.42 |
| 20 | ATOM | 3432 | CB  | HIS | A | 451 | 0 | 2.996 | 41.743 | 30.435 | 1.00 | 14.01 |
|    | ATOM | 3433 | CG  | HIS | A | 451 | 0 | 3.921 | 41.696 | 29.281 | 1.00 | 16.98 |
|    | ATOM | 3434 | ND1 | HIS | A | 451 | 0 | 3.791 | 40.844 | 28.201 | 1.00 | 18.14 |
|    | ATOM | 3435 | CD2 | HIS | A | 451 | 0 | 5.058 | 42.435 | 29.046 | 1.00 | 17.88 |
|    | ATOM | 3436 | CE1 | HIS | A | 451 | 0 | 4.759 | 41.060 | 27.337 | 1.00 | 17.83 |
| 25 | ATOM | 3437 | NE2 | HIS | A | 451 | 0 | 5.554 | 42.011 | 27.842 | 1.00 | 18.98 |
|    | ATOM | 3438 | N   | CYS | A | 452 | 0 | 2.261 | 38.863 | 30.951 | 1.00 | 16.78 |
|    | ATOM | 3439 | CA  | CYS | A | 452 | 0 | 2.167 | 37.537 | 30.388 | 1.00 | 16.34 |
|    | ATOM | 3440 | C   | CYS | A | 452 | 0 | 2.604 | 37.623 | 28.924 | 1.00 | 14.77 |
|    | ATOM | 3441 | O   | CYS | A | 452 | 0 | 2.167 | 38.514 | 28.188 | 1.00 | 13.61 |
| 30 | ATOM | 3442 | CB  | CYS | A | 452 | 0 | 0.727 | 36.983 | 30.451 | 1.00 | 18.22 |
|    | ATOM | 3443 | SG  | CYS | A | 452 | 0 | 0.701 | 35.325 | 29.692 | 1.00 | 19.80 |
|    | ATOM | 3444 | N   | HIS | A | 453 | 0 | 3.388 | 36.640 | 28.474 | 1.00 | 13.29 |
|    | ATOM | 3445 | CA  | HIS | A | 453 | 0 | 3.867 | 36.716 | 27.100 | 1.00 | 13.19 |
|    | ATOM | 3446 | C   | HIS | A | 453 | 0 | 2.983 | 35.987 | 26.099 | 1.00 | 13.47 |
| 35 | ATOM | 3447 | O   | HIS | A | 453 | 0 | 3.296 | 35.974 | 24.906 | 1.00 | 11.93 |
|    | ATOM | 3448 | CB  | HIS | A | 453 | 0 | 5.314 | 36.251 | 27.033 | 1.00 | 13.98 |
|    | ATOM | 3449 | CG  | HIS | A | 453 | 0 | 6.124 | 36.860 | 25.945 | 1.00 | 11.89 |
|    | ATOM | 3450 | ND1 | HIS | A | 453 | 0 | 5.835 | 36.763 | 24.612 | 1.00 | 10.68 |

|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 3451 | CD2 | HIS | A | 453 | 0 | 7.270  | 37.594 | 26.072 | 1.00 | 12.71 |
|    | ATOM | 3452 | CE1 | HIS | A | 453 | 0 | 6.776  | 37.418 | 23.923 | 1.00 | 12.37 |
|    | ATOM | 3453 | NE2 | HIS | A | 453 | 0 | 7.663  | 37.930 | 24.793 | 1.00 | 13.20 |
|    | ATOM | 3454 | N   | ILE | A | 454 | 0 | 1.860  | 35.429 | 26.549 | 1.00 | 15.35 |
| 5  | ATOM | 3455 | CA  | ILE | A | 454 | 0 | 0.849  | 34.937 | 25.600 | 1.00 | 15.85 |
|    | ATOM | 3456 | C   | ILE | A | 454 | 0 | 0.214  | 36.238 | 25.089 | 1.00 | 18.65 |
|    | ATOM | 3457 | O   | ILE | A | 454 | 0 | -0.452 | 36.997 | 25.824 | 1.00 | 17.92 |
|    | ATOM | 3458 | CB  | ILE | A | 454 | 0 | -0.156 | 34.001 | 26.280 | 1.00 | 16.46 |
|    | ATOM | 3459 | CG1 | ILE | A | 454 | 0 | 0.456  | 32.598 | 26.512 | 1.00 | 15.26 |
| 10 | ATOM | 3460 | CG2 | ILE | A | 454 | 0 | -1.402 | 33.898 | 25.419 | 1.00 | 14.21 |
|    | ATOM | 3461 | CD1 | ILE | A | 454 | 0 | -0.249 | 31.804 | 27.592 | 1.00 | 16.26 |
|    | ATOM | 3462 | N   | GLU | A | 455 | 0 | 0.448  | 36.607 | 23.832 | 1.00 | 21.02 |
|    | ATOM | 3463 | CA  | GLU | A | 455 | 0 | -0.024 | 37.856 | 23.289 | 1.00 | 23.78 |
|    | ATOM | 3464 | C   | GLU | A | 455 | 0 | -1.526 | 38.042 | 23.422 | 1.00 | 24.40 |
|    | ATOM | 3465 | O   | GLU | A | 455 | 0 | -1.953 | 39.161 | 23.700 | 1.00 | 24.30 |
|    | ATOM | 3466 | CB  | GLU | A | 455 | 0 | 0.399  | 38.090 | 21.830 | 1.00 | 27.20 |
|    | ATOM | 3467 | CG  | GLU | A | 455 | 0 | 0.602  | 39.599 | 21.595 | 1.00 | 33.86 |
|    | ATOM | 3468 | CD  | GLU | A | 455 | 0 | 1.783  | 40.205 | 22.309 | 1.00 | 37.49 |
|    | ATOM | 3469 | OE1 | GLU | A | 455 | 0 | 2.311  | 39.657 | 23.320 | 1.00 | 41.51 |
|    | ATOM | 3470 | OE2 | GLU | A | 455 | 0 | 2.303  | 41.284 | 21.907 | 1.00 | 41.22 |
|    | ATOM | 3471 | N   | PHE | A | 456 | 0 | -2.347 | 37.005 | 23.334 | 1.00 | 23.97 |
|    | ATOM | 3472 | CA  | PHE | A | 456 | 0 | -3.775 | 37.163 | 23.516 | 1.00 | 24.68 |
|    | ATOM | 3473 | C   | PHE | A | 456 | 0 | -4.084 | 37.533 | 24.959 | 1.00 | 25.11 |
|    | ATOM | 3474 | O   | PHE | A | 456 | 0 | -5.181 | 38.092 | 25.170 | 1.00 | 27.37 |
|    | ATOM | 3475 | CB  | PHE | A | 456 | 0 | -4.552 | 35.919 | 23.023 | 1.00 | 24.76 |
|    | ATOM | 3476 | CG  | PHE | A | 456 | 0 | -4.098 | 35.614 | 21.606 | 1.00 | 24.98 |
|    | ATOM | 3477 | CD1 | PHE | A | 456 | 0 | -4.392 | 36.500 | 20.590 | 1.00 | 24.98 |
|    | ATOM | 3478 | CD2 | PHE | A | 456 | 0 | -3.331 | 34.506 | 21.320 | 1.00 | 24.42 |
|    | ATOM | 3479 | CE1 | PHE | A | 456 | 0 | -3.988 | 36.292 | 19.291 | 1.00 | 25.44 |
| 30 | ATOM | 3480 | CE2 | PHE | A | 456 | 0 | -2.913 | 34.293 | 20.015 | 1.00 | 26.40 |
|    | ATOM | 3481 | CZ  | PHE | A | 456 | 0 | -3.226 | 35.171 | 18.997 | 1.00 | 25.10 |
|    | ATOM | 3482 | N   | HIS | A | 457 | 0 | -3.205 | 37.294 | 25.922 | 1.00 | 22.35 |
|    | ATOM | 3483 | CA  | HIS | A | 457 | 0 | -3.508 | 37.682 | 27.291 | 1.00 | 22.55 |
|    | ATOM | 3484 | C   | HIS | A | 457 | 0 | -3.053 | 39.121 | 27.561 | 1.00 | 23.81 |
| 35 | ATOM | 3485 | O   | HIS | A | 457 | 0 | -3.756 | 39.832 | 28.262 | 1.00 | 21.33 |
|    | ATOM | 3486 | CB  | HIS | A | 457 | 0 | -2.912 | 36.766 | 28.336 | 1.00 | 20.96 |
|    | ATOM | 3487 | CG  | HIS | A | 457 | 0 | -3.345 | 35.346 | 28.201 | 1.00 | 22.51 |
|    | ATOM | 3488 | ND1 | HIS | A | 457 | 0 | -2.745 | 34.329 | 28.905 | 1.00 | 21.40 |

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|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 3489 | CD2 | HIS | A | 457 | 0 | -4.291 | 34.771 | 27.404 | 1.00 | 22.50 |
|    | ATOM | 3490 | CE1 | HIS | A | 457 | 0 | -3.320 | 33.184 | 28.575 | 1.00 | 22.51 |
|    | ATOM | 3491 | NE2 | HIS | A | 457 | 0 | -4.237 | 33.428 | 27.666 | 1.00 | 23.19 |
|    | ATOM | 3492 | N   | LEU | A | 458 | 0 | -1.876 | 39.481 | 27.028 | 1.00 | 23.74 |
| 5  | ATOM | 3493 | CA  | LEU | A | 458 | 0 | -1.357 | 40.817 | 27.125 | 1.00 | 24.76 |
|    | ATOM | 3494 | C   | LEU | A | 458 | 0 | -2.411 | 41.828 | 26.616 | 1.00 | 26.52 |
|    | ATOM | 3495 | O   | LEU | A | 458 | 0 | -2.757 | 42.751 | 27.351 | 1.00 | 25.18 |
|    | ATOM | 3496 | CB  | LEU | A | 458 | 0 | -0.108 | 40.986 | 26.252 | 1.00 | 23.81 |
|    | ATOM | 3497 | CG  | LEU | A | 458 | 0 | 0.898  | 42.062 | 26.624 | 1.00 | 24.09 |
| 10 | ATOM | 3498 | CD1 | LEU | A | 458 | 0 | 1.619  | 42.606 | 25.390 | 1.00 | 24.28 |
|    | ATOM | 3499 | CD2 | LEU | A | 458 | 0 | 0.351  | 43.195 | 27.462 | 1.00 | 23.72 |
|    | ATOM | 3500 | N   | MET | A | 459 | 0 | -2.896 | 41.611 | 25.388 | 1.00 | 28.19 |
|    | ATOM | 3501 | CA  | MET | A | 459 | 0 | -3.914 | 42.458 | 24.785 | 1.00 | 31.98 |
|    | ATOM | 3502 | C   | MET | A | 459 | 0 | -5.207 | 42.436 | 25.603 | 1.00 | 29.95 |
|    | ATOM | 3503 | O   | MET | A | 459 | 0 | -5.886 | 43.439 | 25.520 | 1.00 | 29.10 |
|    | ATOM | 3504 | CB  | MET | A | 459 | 0 | -4.148 | 42.226 | 23.284 | 1.00 | 35.99 |
|    | ATOM | 3505 | CG  | MET | A | 459 | 0 | -5.056 | 41.103 | 22.852 | 1.00 | 42.66 |
|    | ATOM | 3506 | SD  | MET | A | 459 | 0 | -5.296 | 40.817 | 21.069 | 1.00 | 49.28 |
|    | ATOM | 3507 | CE  | MET | A | 459 | 0 | -6.238 | 39.291 | 21.119 | 1.00 | 47.39 |
|    | ATOM | 3508 | N   | ASN | A | 460 | 0 | -5.523 | 41.486 | 26.464 | 1.00 | 29.07 |
|    | ATOM | 3509 | CA  | ASN | A | 460 | 0 | -6.706 | 41.539 | 27.296 | 1.00 | 29.41 |
|    | ATOM | 3510 | C   | ASN | A | 460 | 0 | -6.407 | 41.908 | 28.746 | 1.00 | 28.46 |
|    | ATOM | 3511 | O   | ASN | A | 460 | 0 | -7.183 | 41.577 | 29.645 | 1.00 | 26.89 |
|    | ATOM | 3512 | CB  | ASN | A | 460 | 0 | -7.537 | 40.253 | 27.210 | 1.00 | 31.34 |
|    | ATOM | 3513 | CG  | ASN | A | 460 | 0 | -8.325 | 40.243 | 25.900 | 1.00 | 33.82 |
|    | ATOM | 3514 | OD1 | ASN | A | 460 | 0 | -7.909 | 39.609 | 24.926 | 1.00 | 34.29 |
|    | ATOM | 3515 | ND2 | ASN | A | 460 | 0 | -9.437 | 40.971 | 25.861 | 1.00 | 34.55 |
|    | ATOM | 3516 | N   | GLY | A | 461 | 0 | -5.320 | 42.655 | 28.981 | 1.00 | 26.30 |
|    | ATOM | 3517 | CA  | GLY | A | 461 | 0 | -5.020 | 43.198 | 30.268 | 1.00 | 24.99 |
| 30 | ATOM | 3518 | C   | GLY | A | 461 | 0 | -4.043 | 42.601 | 31.235 | 1.00 | 24.75 |
|    | ATOM | 3519 | O   | GLY | A | 461 | 0 | -3.879 | 43.228 | 32.304 | 1.00 | 22.69 |
|    | ATOM | 3520 | N   | LEU | A | 462 | 0 | -3.375 | 41.478 | 30.914 | 1.00 | 22.85 |
|    | ATOM | 3521 | CA  | LEU | A | 462 | 0 | -2.478 | 40.872 | 31.913 | 1.00 | 22.10 |
|    | ATOM | 3522 | C   | LEU | A | 462 | 0 | -1.071 | 41.485 | 31.890 | 1.00 | 21.56 |
| 35 | ATOM | 3523 | O   | LEU | A | 462 | 0 | -0.116 | 40.876 | 31.415 | 1.00 | 20.28 |
|    | ATOM | 3524 | CB  | LEU | A | 462 | 0 | -2.477 | 39.376 | 31.669 | 1.00 | 20.03 |
|    | ATOM | 3525 | CG  | LEU | A | 462 | 0 | -2.010 | 38.393 | 32.720 | 1.00 | 20.40 |
|    | ATOM | 3526 | CD1 | LEU | A | 462 | 0 | -2.603 | 38.608 | 34.093 | 1.00 | 20.35 |

|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 3527 | CD2 | LEU | A | 462 | 0 | -2.385 | 36.983 | 32.229 | 1.00 | 21.01 |
|    | ATOM | 3528 | N   | ALA | A | 463 | 0 | -0.908 | 42.695 | 32.408 | 1.00 | 20.00 |
|    | ATOM | 3529 | CA  | ALA | A | 463 | 0 | 0.350  | 43.432 | 32.381 | 1.00 | 20.74 |
|    | ATOM | 3530 | C   | ALA | A | 463 | 0 | 0.398  | 44.511 | 33.481 | 1.00 | 21.85 |
| 5  | ATOM | 3531 | O   | ALA | A | 463 | 0 | -0.667 | 44.965 | 33.934 | 1.00 | 22.85 |
|    | ATOM | 3532 | CB  | ALA | A | 463 | 0 | 0.559  | 44.179 | 31.060 | 1.00 | 15.13 |
|    | ATOM | 3533 | N   | ILE | A | 464 | 0 | 1.605  | 44.810 | 33.950 | 1.00 | 19.91 |
|    | ATOM | 3534 | CA  | ILE | A | 464 | 0 | 1.852  | 45.905 | 34.850 | 1.00 | 19.81 |
|    | ATOM | 3535 | C   | ILE | A | 464 | 0 | 3.180  | 46.579 | 34.434 | 1.00 | 19.41 |
| 10 | ATOM | 3536 | O   | ILE | A | 464 | 0 | 3.938  | 46.003 | 33.660 | 1.00 | 18.24 |
|    | ATOM | 3537 | CB  | ILE | A | 464 | 0 | 1.910  | 45.678 | 36.347 | 1.00 | 19.13 |
|    | ATOM | 3538 | CG1 | ILE | A | 464 | 0 | 2.867  | 44.546 | 36.697 | 1.00 | 19.39 |
|    | ATOM | 3539 | CG2 | ILE | A | 464 | 0 | 0.520  | 45.455 | 36.924 | 1.00 | 18.48 |
|    | ATOM | 3540 | CD1 | ILE | A | 464 | 0 | 3.205  | 44.549 | 38.179 | 1.00 | 21.00 |
|    | ATOM | 3541 | N   | VAL | A | 465 | 0 | 3.380  | 47.791 | 34.924 | 1.00 | 18.95 |
|    | ATOM | 3542 | CA  | VAL | A | 465 | 0 | 4.579  | 48.570 | 34.637 | 1.00 | 18.36 |
|    | ATOM | 3543 | C   | VAL | A | 465 | 0 | 5.327  | 48.928 | 35.931 | 1.00 | 18.07 |
|    | ATOM | 3544 | O   | VAL | A | 465 | 0 | 4.787  | 49.424 | 36.931 | 1.00 | 15.19 |
|    | ATOM | 3545 | CB  | VAL | A | 465 | 0 | 4.329  | 49.913 | 33.918 | 1.00 | 19.73 |
|    | ATOM | 3546 | CG1 | VAL | A | 465 | 0 | 5.659  | 50.605 | 33.602 | 1.00 | 18.34 |
|    | ATOM | 3547 | CG2 | VAL | A | 465 | 0 | 3.522  | 49.766 | 32.629 | 1.00 | 18.74 |
|    | ATOM | 3548 | N   | PHE | A | 466 | 0 | 6.649  | 48.655 | 35.879 | 1.00 | 17.55 |
|    | ATOM | 3549 | CA  | PHE | A | 466 | 0 | 7.499  | 49.051 | 37.013 | 1.00 | 14.72 |
|    | ATOM | 3550 | C   | PHE | A | 466 | 0 | 8.251  | 50.344 | 36.653 | 1.00 | 12.68 |
|    | ATOM | 3551 | O   | PHE | A | 466 | 0 | 9.007  | 50.420 | 35.679 | 1.00 | 12.23 |
|    | ATOM | 3552 | CB  | PHE | A | 466 | 0 | 8.484  | 47.978 | 37.381 | 1.00 | 15.19 |
|    | ATOM | 3553 | CG  | PHE | A | 466 | 0 | 7.962  | 46.770 | 38.080 | 1.00 | 15.90 |
|    | ATOM | 3554 | CD1 | PHE | A | 466 | 0 | 7.328  | 46.856 | 39.299 | 1.00 | 16.23 |
|    | ATOM | 3555 | CD2 | PHE | A | 466 | 0 | 8.153  | 45.533 | 37.492 | 1.00 | 16.23 |
| 30 | ATOM | 3556 | CE1 | PHE | A | 466 | 0 | 6.861  | 45.720 | 39.936 | 1.00 | 15.97 |
|    | ATOM | 3557 | CE2 | PHE | A | 466 | 0 | 7.665  | 44.389 | 38.133 | 1.00 | 18.27 |
|    | ATOM | 3558 | CZ  | PHE | A | 466 | 0 | 7.018  | 44.480 | 39.352 | 1.00 | 16.74 |
|    | ATOM | 3559 | N   | ALA | A | 467 | 0 | 8.045  | 51.361 | 37.443 | 1.00 | 10.60 |
|    | ATOM | 3560 | CA  | ALA | A | 467 | 0 | 8.788  | 52.648 | 37.194 | 1.00 | 12.27 |
| 35 | ATOM | 3561 | C   | ALA | A | 467 | 0 | 10.007 | 52.526 | 38.111 | 1.00 | 12.02 |
|    | ATOM | 3562 | O   | ALA | A | 467 | 0 | 9.905  | 52.728 | 39.325 | 1.00 | 12.43 |
|    | ATOM | 3563 | CB  | ALA | A | 467 | 0 | 7.845  | 53.790 | 37.501 | 1.00 | 10.50 |
|    | ATOM | 3564 | N   | GLU | A | 468 | 0 | 11.126 | 51.989 | 37.625 | 1.00 | 12.62 |

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|    |      |      |     |     |       |   |        |        |        |      |       |
|----|------|------|-----|-----|-------|---|--------|--------|--------|------|-------|
|    | ATOM | 3565 | CA  | GLU | A 468 | 0 | 12.263 | 51.683 | 38.515 | 1.00 | 14.63 |
|    | ATOM | 3566 | C   | GLU | A 468 | 0 | 13.195 | 52.883 | 38.685 | 1.00 | 13.91 |
|    | ATOM | 3567 | O   | GLU | A 468 | 0 | 13.631 | 53.369 | 37.651 | 1.00 | 13.05 |
|    | ATOM | 3568 | CB  | GLU | A 468 | 0 | 13.049 | 50.546 | 37.843 | 1.00 | 14.51 |
| 5  | ATOM | 3569 | CG  | GLU | A 468 | 0 | 14.256 | 50.035 | 38.629 | 1.00 | 16.84 |
|    | ATOM | 3570 | CD  | GLU | A 468 | 0 | 14.805 | 48.779 | 37.975 | 1.00 | 17.96 |
|    | ATOM | 3571 | OE1 | GLU | A 468 | 0 | 15.985 | 48.479 | 38.124 | 1.00 | 16.98 |
|    | ATOM | 3572 | OE2 | GLU | A 468 | 0 | 14.086 | 48.043 | 37.260 | 1.00 | 18.42 |
|    | ATOM | 3573 | N   | ASP | A 469 | 0 | 13.546 | 53.286 | 39.886 | 1.00 | 15.17 |
| 10 | ATOM | 3574 | CA  | ASP | A 469 | 0 | 14.491 | 54.371 | 40.116 | 1.00 | 16.85 |
|    | ATOM | 3575 | C   | ASP | A 469 | 0 | 14.134 | 55.630 | 39.333 | 1.00 | 16.33 |
|    | ATOM | 3576 | O   | ASP | A 469 | 0 | 14.851 | 56.046 | 38.437 | 1.00 | 16.59 |
|    | ATOM | 3577 | CB  | ASP | A 469 | 0 | 15.899 | 53.920 | 39.748 | 1.00 | 19.86 |
|    | ATOM | 3578 | CG  | ASP | A 469 | 0 | 17.040 | 54.766 | 40.289 | 1.00 | 21.40 |
| 15 | ATOM | 3579 | OD1 | ASP | A 469 | 0 | 16.811 | 55.793 | 40.943 | 1.00 | 22.21 |
|    | ATOM | 3580 | OD2 | ASP | A 469 | 0 | 18.216 | 54.403 | 40.069 | 1.00 | 22.21 |
|    | ATOM | 3581 | N   | MET | A 470 | 0 | 13.007 | 56.246 | 39.635 | 1.00 | 16.12 |
|    | ATOM | 3582 | CA  | MET | A 470 | 0 | 12.522 | 57.373 | 38.853 | 1.00 | 18.77 |
|    | ATOM | 3583 | C   | MET | A 470 | 0 | 13.451 | 58.576 | 38.950 | 1.00 | 16.31 |
| 20 | ATOM | 3584 | O   | MET | A 470 | 0 | 13.591 | 59.208 | 37.925 | 1.00 | 13.55 |
|    | ATOM | 3585 | CB  | MET | A 470 | 0 | 11.116 | 57.847 | 39.302 | 1.00 | 20.06 |
|    | ATOM | 3586 | CG  | MET | A 470 | 0 | 10.041 | 56.941 | 38.684 | 1.00 | 23.99 |
|    | ATOM | 3587 | SD  | MET | A 470 | 0 | 8.375  | 57.337 | 39.283 | 1.00 | 26.08 |
|    | ATOM | 3588 | CE  | MET | A 470 | 0 | 8.030  | 58.581 | 38.020 | 1.00 | 24.40 |
| 25 | ATOM | 3589 | N   | ALA | A 471 | 0 | 14.046 | 58.793 | 40.117 | 1.00 | 14.69 |
|    | ATOM | 3590 | CA  | ALA | A 471 | 0 | 14.953 | 59.906 | 40.287 | 1.00 | 16.97 |
|    | ATOM | 3591 | C   | ALA | A 471 | 0 | 16.141 | 59.864 | 39.335 | 1.00 | 18.79 |
|    | ATOM | 3592 | O   | ALA | A 471 | 0 | 16.602 | 60.956 | 38.945 | 1.00 | 21.08 |
|    | ATOM | 3593 | CB  | ALA | A 471 | 0 | 15.471 | 59.927 | 41.728 | 1.00 | 17.62 |
| 30 | ATOM | 3594 | N   | ASN | A 472 | 0 | 16.623 | 58.695 | 38.912 | 1.00 | 17.28 |
|    | ATOM | 3595 | CA  | ASN | A 472 | 0 | 17.788 | 58.675 | 38.015 | 1.00 | 16.56 |
|    | ATOM | 3596 | C   | ASN | A 472 | 0 | 17.457 | 58.355 | 36.572 | 1.00 | 16.99 |
|    | ATOM | 3597 | O   | ASN | A 472 | 0 | 18.407 | 58.143 | 35.795 | 1.00 | 18.74 |
|    | ATOM | 3598 | CB  | ASN | A 472 | 0 | 18.811 | 57.645 | 38.548 | 1.00 | 14.60 |
| 35 | ATOM | 3599 | CG  | ASN | A 472 | 0 | 19.417 | 58.132 | 39.887 | 1.00 | 14.00 |
|    | ATOM | 3600 | OD1 | ASN | A 472 | 0 | 18.895 | 57.830 | 40.967 | 1.00 | 12.71 |
|    | ATOM | 3601 | ND2 | ASN | A 472 | 0 | 20.468 | 58.916 | 39.775 | 1.00 | 10.80 |
|    | ATOM | 3602 | N   | THR | A 473 | 0 | 16.174 | 58.284 | 36.239 | 1.00 | 14.26 |



|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 3603 | CA  | THR | A | 473 | 0 | 15.789 | 57.885 | 34.882 | 1.00 | 15.82 |
|    | ATOM | 3604 | C   | THR | A | 473 | 0 | 16.150 | 58.891 | 33.812 | 1.00 | 16.81 |
|    | ATOM | 3605 | O   | THR | A | 473 | 0 | 16.599 | 58.455 | 32.746 | 1.00 | 15.89 |
|    | ATOM | 3606 | CB  | THR | A | 473 | 0 | 14.267 | 57.576 | 34.826 | 1.00 | 16.10 |
| 5  | ATOM | 3607 | OG1 | THR | A | 473 | 0 | 14.001 | 56.416 | 35.609 | 1.00 | 15.41 |
|    | ATOM | 3608 | CG2 | THR | A | 473 | 0 | 13.750 | 57.337 | 33.427 | 1.00 | 15.24 |
|    | ATOM | 3609 | N   | VAL | A | 474 | 0 | 16.000 | 60.195 | 34.081 | 1.00 | 18.57 |
|    | ATOM | 3610 | CA  | VAL | A | 474 | 0 | 16.355 | 61.192 | 33.050 | 1.00 | 21.06 |
|    | ATOM | 3611 | C   | VAL | A | 474 | 0 | 17.859 | 61.209 | 32.817 | 1.00 | 19.12 |
| 10 | ATOM | 3612 | O   | VAL | A | 474 | 0 | 18.339 | 61.234 | 31.688 | 1.00 | 19.95 |
|    | ATOM | 3613 | CB  | VAL | A | 474 | 0 | 15.860 | 62.616 | 33.424 | 1.00 | 22.91 |
|    | ATOM | 3614 | CG1 | VAL | A | 474 | 0 | 16.467 | 63.702 | 32.538 | 1.00 | 23.06 |
|    | ATOM | 3615 | CG2 | VAL | A | 474 | 0 | 14.346 | 62.721 | 33.334 | 1.00 | 23.04 |
|    | ATOM | 3616 | N   | ASP | A | 475 | 0 | 18.647 | 61.175 | 33.886 | 1.00 | 19.20 |
|    | ATOM | 3617 | CA  | ASP | A | 475 | 0 | 20.109 | 61.168 | 33.741 | 1.00 | 18.98 |
|    | ATOM | 3618 | C   | ASP | A | 475 | 0 | 20.578 | 59.899 | 33.047 | 1.00 | 17.52 |
|    | ATOM | 3619 | O   | ASP | A | 475 | 0 | 21.386 | 60.028 | 32.130 | 1.00 | 18.31 |
|    | ATOM | 3620 | CB  | ASP | A | 475 | 0 | 20.780 | 61.273 | 35.119 | 1.00 | 20.27 |
|    | ATOM | 3621 | CG  | ASP | A | 475 | 0 | 22.283 | 61.075 | 35.107 | 1.00 | 20.18 |
| 20 | ATOM | 3622 | OD1 | ASP | A | 475 | 0 | 22.950 | 61.889 | 34.431 | 1.00 | 21.73 |
|    | ATOM | 3623 | OD2 | ASP | A | 475 | 0 | 22.798 | 60.139 | 35.750 | 1.00 | 18.03 |
|    | ATOM | 3624 | N   | ALA | A | 476 | 0 | 20.062 | 58.725 | 33.392 | 1.00 | 18.26 |
|    | ATOM | 3625 | CA  | ALA | A | 476 | 0 | 20.539 | 57.486 | 32.793 | 1.00 | 18.93 |
|    | ATOM | 3626 | C   | ALA | A | 476 | 0 | 20.165 | 57.269 | 31.343 | 1.00 | 20.62 |
|    | ATOM | 3627 | O   | ALA | A | 476 | 0 | 20.845 | 56.502 | 30.661 | 1.00 | 22.64 |
|    | ATOM | 3628 | CB  | ALA | A | 476 | 0 | 19.966 | 56.298 | 33.551 | 1.00 | 18.48 |
|    | ATOM | 3629 | N   | ASN | A | 477 | 0 | 19.047 | 57.787 | 30.858 | 1.00 | 22.66 |
|    | ATOM | 3630 | CA  | ASN | A | 477 | 0 | 18.605 | 57.512 | 29.491 | 1.00 | 25.22 |
|    | ATOM | 3631 | C   | ASN | A | 477 | 0 | 18.578 | 58.782 | 28.683 | 1.00 | 28.55 |
| 30 | ATOM | 3632 | O   | ASN | A | 477 | 0 | 17.969 | 59.755 | 29.143 | 1.00 | 30.20 |
|    | ATOM | 3633 | CB  | ASN | A | 477 | 0 | 17.172 | 56.948 | 29.560 | 1.00 | 24.22 |
|    | ATOM | 3634 | CG  | ASN | A | 477 | 0 | 17.114 | 55.666 | 30.380 | 1.00 | 23.73 |
|    | ATOM | 3635 | OD1 | ASN | A | 477 | 0 | 16.747 | 55.672 | 31.570 | 1.00 | 21.33 |
|    | ATOM | 3636 | ND2 | ASN | A | 477 | 0 | 17.512 | 54.575 | 29.736 | 1.00 | 20.87 |
| 35 | ATOM | 3637 | N   | ASN | A | 478 | 0 | 19.208 | 58.878 | 27.514 | 1.00 | 31.69 |
|    | ATOM | 3638 | CA  | ASN | A | 478 | 0 | 19.036 | 60.131 | 26.776 | 1.00 | 33.61 |
|    | ATOM | 3639 | C   | ASN | A | 478 | 0 | 18.758 | 59.770 | 25.331 | 1.00 | 32.22 |
|    | ATOM | 3640 | O   | ASN | A | 478 | 0 | 19.602 | 59.478 | 24.508 | 1.00 | 32.16 |

|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 3641 | CB  | ASN | A | 478 | 0 | 20.086 | 61.194 | 27.017 | 1.00 | 38.57 |
|    | ATOM | 3642 | CG  | ASN | A | 478 | 0 | 21.426 | 60.602 | 27.370 | 1.00 | 40.94 |
|    | ATOM | 3643 | OD1 | ASN | A | 478 | 0 | 21.928 | 59.903 | 26.484 | 1.00 | 44.60 |
|    | ATOM | 3644 | ND2 | ASN | A | 478 | 0 | 21.866 | 60.861 | 28.578 | 1.00 | 41.32 |
| 5  | ATOM | 3645 | N   | PRO | A | 479 | 0 | 17.461 | 59.733 | 25.075 | 1.00 | 32.37 |
|    | ATOM | 3646 | CA  | PRO | A | 479 | 0 | 16.890 | 59.381 | 23.790 | 1.00 | 31.84 |
|    | ATOM | 3647 | C   | PRO | A | 479 | 0 | 17.268 | 60.448 | 22.776 | 1.00 | 32.35 |
|    | ATOM | 3648 | O   | PRO | A | 479 | 0 | 17.422 | 61.609 | 23.136 | 1.00 | 32.66 |
|    | ATOM | 3649 | CB  | PRO | A | 479 | 0 | 15.364 | 59.385 | 23.931 | 1.00 | 31.68 |
| 10 | ATOM | 3650 | CG  | PRO | A | 479 | 0 | 15.126 | 59.724 | 25.373 | 1.00 | 31.69 |
|    | ATOM | 3651 | CD  | PRO | A | 479 | 0 | 16.416 | 60.071 | 26.064 | 1.00 | 32.23 |
|    | ATOM | 3652 | N   | PRO | A | 480 | 0 | 17.399 | 60.036 | 21.537 | 1.00 | 31.62 |
|    | ATOM | 3653 | CA  | PRO | A | 480 | 0 | 17.670 | 60.939 | 20.422 | 1.00 | 30.72 |
|    | ATOM | 3654 | C   | PRO | A | 480 | 0 | 16.452 | 61.827 | 20.225 | 1.00 | 30.37 |
| 15 | ATOM | 3655 | O   | PRO | A | 480 | 0 | 15.362 | 61.525 | 20.733 | 1.00 | 29.47 |
|    | ATOM | 3656 | CB  | PRO | A | 480 | 0 | 17.935 | 60.035 | 19.203 | 1.00 | 29.87 |
|    | ATOM | 3657 | CG  | PRO | A | 480 | 0 | 17.111 | 58.811 | 19.590 | 1.00 | 30.44 |
|    | ATOM | 3658 | CD  | PRO | A | 480 | 0 | 17.161 | 58.657 | 21.093 | 1.00 | 30.35 |
|    | ATOM | 3659 | N   | VAL | A | 481 | 0 | 16.559 | 62.906 | 19.458 | 1.00 | 31.72 |
| 20 | ATOM | 3660 | CA  | VAL | A | 481 | 0 | 15.398 | 63.788 | 19.268 | 1.00 | 30.68 |
|    | ATOM | 3661 | C   | VAL | A | 481 | 0 | 14.335 | 63.090 | 18.446 | 1.00 | 29.51 |
|    | ATOM | 3662 | O   | VAL | A | 481 | 0 | 13.134 | 63.284 | 18.648 | 1.00 | 27.97 |
|    | ATOM | 3663 | CB  | VAL | A | 481 | 0 | 15.818 | 65.132 | 18.648 | 1.00 | 33.04 |
|    | ATOM | 3664 | CG1 | VAL | A | 481 | 0 | 16.126 | 65.010 | 17.161 | 1.00 | 31.91 |
| 25 | ATOM | 3665 | CG2 | VAL | A | 481 | 0 | 14.717 | 66.171 | 18.907 | 1.00 | 33.32 |
|    | ATOM | 3666 | N   | GLU | A | 482 | 0 | 14.746 | 62.167 | 17.562 | 1.00 | 28.90 |
|    | ATOM | 3667 | CA  | GLU | A | 482 | 0 | 13.755 | 61.402 | 16.803 | 1.00 | 29.62 |
|    | ATOM | 3668 | C   | GLU | A | 482 | 0 | 12.839 | 60.565 | 17.691 | 1.00 | 28.33 |
|    | ATOM | 3669 | O   | GLU | A | 482 | 0 | 11.704 | 60.287 | 17.280 | 1.00 | 28.36 |
| 30 | ATOM | 3670 | CB  | GLU | A | 482 | 0 | 14.449 | 60.498 | 15.788 | 1.00 | 30.63 |
|    | ATOM | 3671 | CG  | GLU | A | 482 | 0 | 15.143 | 61.256 | 14.666 | 1.00 | 32.78 |
|    | ATOM | 3672 | CD  | GLU | A | 482 | 0 | 16.522 | 61.784 | 14.990 | 1.00 | 34.96 |
|    | ATOM | 3673 | OE1 | GLU | A | 482 | 0 | 17.021 | 61.746 | 16.141 | 1.00 | 34.62 |
|    | ATOM | 3674 | OE2 | GLU | A | 482 | 0 | 17.170 | 62.297 | 14.033 | 1.00 | 37.13 |
| 35 | ATOM | 3675 | N   | TRP | A | 483 | 0 | 13.311 | 60.124 | 18.857 | 1.00 | 25.91 |
|    | ATOM | 3676 | CA  | TRP | A | 483 | 0 | 12.496 | 59.280 | 19.711 | 1.00 | 25.49 |
|    | ATOM | 3677 | C   | TRP | A | 483 | 0 | 11.224 | 60.011 | 20.125 | 1.00 | 26.47 |
|    | ATOM | 3678 | O   | TRP | A | 483 | 0 | 10.155 | 59.405 | 20.116 | 1.00 | 26.95 |

|    |      |      |     |           |   |        |        |        |      |       |
|----|------|------|-----|-----------|---|--------|--------|--------|------|-------|
|    | ATOM | 3679 | CB  | TRP A 483 | 0 | 13.216 | 58.807 | 20.974 | 1.00 | 21.98 |
|    | ATOM | 3680 | CG  | TRP A 483 | 0 | 12.376 | 58.144 | 22.013 | 1.00 | 21.49 |
|    | ATOM | 3681 | CD1 | TRP A 483 | 0 | 11.960 | 56.827 | 22.003 | 1.00 | 20.81 |
|    | ATOM | 3682 | CD2 | TRP A 483 | 0 | 11.818 | 58.730 | 23.194 | 1.00 | 20.14 |
| 5  | ATOM | 3683 | NE1 | TRP A 483 | 0 | 11.187 | 56.575 | 23.143 | 1.00 | 20.29 |
|    | ATOM | 3684 | CE2 | TRP A 483 | 0 | 11.097 | 57.736 | 23.868 | 1.00 | 20.29 |
|    | ATOM | 3685 | CE3 | TRP A 483 | 0 | 11.875 | 60.006 | 23.754 | 1.00 | 21.32 |
|    | ATOM | 3686 | CZ2 | TRP A 483 | 0 | 10.422 | 57.973 | 25.062 | 1.00 | 20.89 |
|    | ATOM | 3687 | CZ3 | TRP A 483 | 0 | 11.217 | 60.248 | 24.946 | 1.00 | 20.78 |
| 10 | ATOM | 3688 | CH2 | TRP A 483 | 0 | 10.495 | 59.227 | 25.596 | 1.00 | 21.44 |
|    | ATOM | 3689 | N   | ALA A 484 | 0 | 11.342 | 61.261 | 20.560 | 1.00 | 28.59 |
|    | ATOM | 3690 | CA  | ALA A 484 | 0 | 10.165 | 62.003 | 21.029 | 1.00 | 30.73 |
|    | ATOM | 3691 | C   | ALA A 484 | 0 | 9.226  | 62.350 | 19.869 | 1.00 | 30.42 |
|    | ATOM | 3692 | O   | ALA A 484 | 0 | 8.024  | 62.337 | 20.071 | 1.00 | 31.34 |
| 15 | ATOM | 3693 | CB  | ALA A 484 | 0 | 10.583 | 63.244 | 21.806 | 1.00 | 31.05 |
|    | ATOM | 3694 | N   | GLN A 485 | 0 | 9.702  | 62.488 | 18.653 | 1.00 | 30.79 |
|    | ATOM | 3695 | CA  | GLN A 485 | 0 | 8.927  | 62.742 | 17.466 | 1.00 | 33.16 |
|    | ATOM | 3696 | C   | GLN A 485 | 0 | 8.026  | 61.608 | 17.017 | 1.00 | 32.81 |
|    | ATOM | 3697 | O   | GLN A 485 | 0 | 7.044  | 61.847 | 16.302 | 1.00 | 32.74 |
| 20 | ATOM | 3698 | CB  | GLN A 485 | 0 | 9.859  | 63.113 | 16.290 | 1.00 | 34.56 |
|    | ATOM | 3699 | CG  | GLN A 485 | 0 | 10.631 | 64.361 | 16.686 | 1.00 | 39.67 |
|    | ATOM | 3700 | CD  | GLN A 485 | 0 | 11.559 | 64.919 | 15.640 | 1.00 | 42.86 |
|    | ATOM | 3701 | OE1 | GLN A 485 | 0 | 11.528 | 66.145 | 15.434 | 1.00 | 45.48 |
|    | ATOM | 3702 | NE2 | GLN A 485 | 0 | 12.375 | 64.103 | 14.982 | 1.00 | 44.07 |
| 25 | ATOM | 3703 | N   | LEU A 486 | 0 | 8.328  | 60.380 | 17.443 | 1.00 | 30.46 |
|    | ATOM | 3704 | CA  | LEU A 486 | 0 | 7.500  | 59.231 | 17.095 | 1.00 | 27.76 |
|    | ATOM | 3705 | C   | LEU A 486 | 0 | 6.051  | 59.510 | 17.509 | 1.00 | 28.23 |
|    | ATOM | 3706 | O   | LEU A 486 | 0 | 5.100  | 59.331 | 16.752 | 1.00 | 26.71 |
|    | ATOM | 3707 | CB  | LEU A 486 | 0 | 8.043  | 58.034 | 17.838 | 1.00 | 25.03 |
| 30 | ATOM | 3708 | CG  | LEU A 486 | 0 | 8.988  | 57.012 | 17.226 | 1.00 | 24.18 |
|    | ATOM | 3709 | CD1 | LEU A 486 | 0 | 9.780  | 57.416 | 16.011 | 1.00 | 21.41 |
|    | ATOM | 3710 | CD2 | LEU A 486 | 0 | 9.864  | 56.464 | 18.342 | 1.00 | 23.28 |
|    | ATOM | 3711 | N   | CYS A 487 | 0 | 5.870  | 59.974 | 18.739 | 1.00 | 28.05 |
|    | ATOM | 3712 | CA  | CYS A 487 | 0 | 4.560  | 60.263 | 19.279 | 1.00 | 30.77 |
| 35 | ATOM | 3713 | C   | CYS A 487 | 0 | 3.823  | 61.350 | 18.499 | 1.00 | 33.19 |
|    | ATOM | 3714 | O   | CYS A 487 | 0 | 2.627  | 61.170 | 18.263 | 1.00 | 33.69 |
|    | ATOM | 3715 | CB  | CYS A 487 | 0 | 4.643  | 60.637 | 20.752 | 1.00 | 27.94 |
|    | ATOM | 3716 | SG  | CYS A 487 | 0 | 5.214  | 59.280 | 21.781 | 1.00 | 27.23 |

|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 3717 | N   | GLU | A | 488 | 0 | 4.543  | 62.373 | 18.064 | 1.00 | 35.80 |
|    | ATOM | 3718 | CA  | GLU | A | 488 | 0 | 3.871  | 63.458 | 17.334 | 1.00 | 39.12 |
|    | ATOM | 3719 | C   | GLU | A | 488 | 0 | 3.384  | 62.928 | 15.995 | 1.00 | 37.78 |
|    | ATOM | 3720 | O   | GLU | A | 488 | 0 | 2.186  | 63.025 | 15.711 | 1.00 | 37.61 |
| 5  | ATOM | 3721 | CB  | GLU | A | 488 | 0 | 4.737  | 64.697 | 17.257 | 1.00 | 42.04 |
|    | ATOM | 3722 | CG  | GLU | A | 488 | 0 | 5.667  | 64.822 | 16.064 | 1.00 | 47.75 |
|    | ATOM | 3723 | CD  | GLU | A | 488 | 0 | 5.634  | 66.239 | 15.500 | 1.00 | 51.36 |
|    | ATOM | 3724 | OE1 | GLU | A | 488 | 0 | 5.501  | 66.422 | 14.266 | 1.00 | 52.66 |
|    | ATOM | 3725 | OE2 | GLU | A | 488 | 0 | 5.743  | 67.154 | 16.358 | 1.00 | 53.40 |
| 10 | ATOM | 3726 | N   | ILE | A | 489 | 0 | 4.263  | 62.253 | 15.267 | 1.00 | 36.63 |
|    | ATOM | 3727 | CA  | ILE | A | 489 | 0 | 3.906  | 61.647 | 14.004 | 1.00 | 36.74 |
|    | ATOM | 3728 | C   | ILE | A | 489 | 0 | 2.754  | 60.662 | 14.113 | 1.00 | 36.98 |
|    | ATOM | 3729 | O   | ILE | A | 489 | 0 | 1.847  | 60.664 | 13.276 | 1.00 | 38.60 |
|    | ATOM | 3730 | CB  | ILE | A | 489 | 0 | 5.089  | 60.903 | 13.361 | 1.00 | 36.57 |
|    | ATOM | 3731 | CG1 | ILE | A | 489 | 0 | 6.267  | 61.853 | 13.148 | 1.00 | 36.46 |
|    | ATOM | 3732 | CG2 | ILE | A | 489 | 0 | 4.651  | 60.305 | 12.030 | 1.00 | 36.90 |
|    | ATOM | 3733 | CD1 | ILE | A | 489 | 0 | 7.535  | 61.194 | 12.654 | 1.00 | 35.62 |
|    | ATOM | 3734 | N   | TYR | A | 490 | 0 | 2.758  | 59.808 | 15.105 | 1.00 | 36.22 |
|    | ATOM | 3735 | CA  | TYR | A | 490 | 0 | 1.771  | 58.765 | 15.298 | 1.00 | 35.95 |
|    | ATOM | 3736 | C   | TYR | A | 490 | 0 | 0.413  | 59.314 | 15.692 | 1.00 | 37.83 |
|    | ATOM | 3737 | O   | TYR | A | 490 | 0 | -0.581 | 58.816 | 15.165 | 1.00 | 39.24 |
|    | ATOM | 3738 | CB  | TYR | A | 490 | 0 | 2.206  | 57.817 | 16.409 | 1.00 | 32.47 |
|    | ATOM | 3739 | CG  | TYR | A | 490 | 0 | 1.314  | 56.641 | 16.663 | 1.00 | 30.55 |
|    | ATOM | 3740 | CD1 | TYR | A | 490 | 0 | 1.176  | 55.623 | 15.726 | 1.00 | 29.96 |
|    | ATOM | 3741 | CD2 | TYR | A | 490 | 0 | 0.610  | 56.536 | 17.849 | 1.00 | 29.79 |
|    | ATOM | 3742 | CE1 | TYR | A | 490 | 0 | 0.378  | 54.528 | 15.975 | 1.00 | 29.51 |
|    | ATOM | 3743 | CE2 | TYR | A | 490 | 0 | -0.192 | 55.441 | 18.114 | 1.00 | 29.64 |
|    | ATOM | 3744 | CZ  | TYR | A | 490 | 0 | -0.288 | 54.445 | 17.171 | 1.00 | 29.51 |
|    | ATOM | 3745 | OH  | TYR | A | 490 | 0 | -1.101 | 53.363 | 17.437 | 1.00 | 32.06 |
| 30 | ATOM | 3746 | N   | ASP | A | 491 | 0 | 0.369  | 60.302 | 16.564 | 1.00 | 40.86 |
|    | ATOM | 3747 | CA  | ASP | A | 491 | 0 | -0.909 | 60.887 | 16.963 | 1.00 | 43.97 |
|    | ATOM | 3748 | C   | ASP | A | 491 | 0 | -1.586 | 61.633 | 15.811 | 1.00 | 45.30 |
|    | ATOM | 3749 | O   | ASP | A | 491 | 0 | -2.809 | 61.752 | 15.820 | 1.00 | 45.60 |
|    | ATOM | 3750 | CB  | ASP | A | 491 | 0 | -0.764 | 61.800 | 18.170 | 1.00 | 44.67 |
| 35 | ATOM | 3751 | CG  | ASP | A | 491 | 0 | -0.441 | 61.101 | 19.475 | 1.00 | 45.90 |
|    | ATOM | 3752 | OD1 | ASP | A | 491 | 0 | 0.149  | 61.761 | 20.364 | 1.00 | 46.32 |
|    | ATOM | 3753 | OD2 | ASP | A | 491 | 0 | -0.763 | 59.911 | 19.669 | 1.00 | 46.04 |
|    | ATOM | 3754 | N   | ASP | A | 492 | 0 | -0.871 | 62.107 | 14.817 | 1.00 | 46.75 |

|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 3755 | CA  | ASP | A | 492 | 0 | -1.323 | 62.804 | 13.653 | 1.00 | 48.98 |
|    | ATOM | 3756 | C   | ASP | A | 492 | 0 | -1.702 | 61.936 | 12.460 | 1.00 | 49.48 |
|    | ATOM | 3757 | O   | ASP | A | 492 | 0 | -2.002 | 62.458 | 11.378 | 1.00 | 50.24 |
|    | ATOM | 3758 | CB  | ASP | A | 492 | 0 | -0.155 | 63.649 | 13.107 | 1.00 | 51.54 |
| 5  | ATOM | 3759 | CG  | ASP | A | 492 | 0 | -0.168 | 65.081 | 13.587 | 1.00 | 53.57 |
|    | ATOM | 3760 | OD1 | ASP | A | 492 | 0 | -0.886 | 65.375 | 14.570 | 1.00 | 54.07 |
|    | ATOM | 3761 | OD2 | ASP | A | 492 | 0 | 0.576  | 65.857 | 12.939 | 1.00 | 55.04 |
|    | ATOM | 3762 | N   | LEU | A | 493 | 0 | -1.554 | 60.630 | 12.584 | 1.00 | 49.01 |
|    | ATOM | 3763 | CA  | LEU | A | 493 | 0 | -1.896 | 59.732 | 11.483 | 1.00 | 47.63 |
| 10 | ATOM | 3764 | C   | LEU | A | 493 | 0 | -3.377 | 59.872 | 11.137 | 1.00 | 47.61 |
|    | ATOM | 3765 | O   | LEU | A | 493 | 0 | -4.209 | 60.018 | 12.027 | 1.00 | 47.02 |
|    | ATOM | 3766 | CB  | LEU | A | 493 | 0 | -1.661 | 58.296 | 11.940 | 1.00 | 46.08 |
|    | ATOM | 3767 | CG  | LEU | A | 493 | 0 | -0.485 | 57.463 | 11.464 | 1.00 | 45.24 |
|    | ATOM | 3768 | CD1 | LEU | A | 493 | 0 | 0.616  | 58.224 | 10.756 | 1.00 | 43.57 |
| 15 | ATOM | 3769 | CD2 | LEU | A | 493 | 0 | 0.075  | 56.710 | 12.669 | 1.00 | 44.62 |
|    | ATOM | 3770 | N   | PRO | A | 494 | 0 | -3.694 | 59.763 | 9.866  | 1.00 | 48.01 |
|    | ATOM | 3771 | CA  | PRO | A | 494 | 0 | -5.049 | 59.734 | 9.353  | 1.00 | 49.11 |
|    | ATOM | 3772 | C   | PRO | A | 494 | 0 | -5.617 | 58.339 | 9.570  | 1.00 | 51.21 |
|    | ATOM | 3773 | O   | PRO | A | 494 | 0 | -4.919 | 57.325 | 9.495  | 1.00 | 50.61 |
| 20 | ATOM | 3774 | CB  | PRO | A | 494 | 0 | -4.938 | 59.995 | 7.843  | 1.00 | 48.94 |
|    | ATOM | 3775 | CG  | PRO | A | 494 | 0 | -3.559 | 59.463 | 7.544  | 1.00 | 48.47 |
|    | ATOM | 3776 | CD  | PRO | A | 494 | 0 | -2.714 | 59.538 | 8.797  | 1.00 | 48.22 |
|    | ATOM | 3777 | N   | PRO | A | 495 | 0 | -6.915 | 58.238 | 9.796  | 1.00 | 53.24 |
|    | ATOM | 3778 | CA  | PRO | A | 495 | 0 | -7.630 | 57.006 | 10.055 | 1.00 | 53.93 |
|    | ATOM | 3779 | C   | PRO | A | 495 | 0 | -7.404 | 55.890 | 9.058  | 1.00 | 54.84 |
|    | ATOM | 3780 | O   | PRO | A | 495 | 0 | -7.348 | 54.705 | 9.423  | 1.00 | 55.08 |
|    | ATOM | 3781 | CB  | PRO | A | 495 | 0 | -9.126 | 57.362 | 10.146 | 1.00 | 54.40 |
|    | ATOM | 3782 | CG  | PRO | A | 495 | 0 | -9.090 | 58.848 | 10.391 | 1.00 | 54.17 |
|    | ATOM | 3783 | CD  | PRO | A | 495 | 0 | -7.787 | 59.420 | 9.895  | 1.00 | 53.58 |
| 30 | ATOM | 3784 | N   | GLU | A | 496 | 0 | -7.190 | 56.198 | 7.784  | 1.00 | 55.36 |
|    | ATOM | 3785 | CA  | GLU | A | 496 | 0 | -6.936 | 55.187 | 6.763  | 1.00 | 55.83 |
|    | ATOM | 3786 | C   | GLU | A | 496 | 0 | -5.582 | 54.521 | 6.971  | 1.00 | 54.09 |
|    | ATOM | 3787 | O   | GLU | A | 496 | 0 | -5.345 | 53.406 | 6.505  | 1.00 | 53.29 |
|    | ATOM | 3788 | CB  | GLU | A | 496 | 0 | -7.091 | 55.805 | 5.378  | 1.00 | 57.96 |
| 35 | ATOM | 3789 | CG  | GLU | A | 496 | 0 | -6.030 | 55.604 | 4.339  | 1.00 | 61.30 |
|    | ATOM | 3790 | CD  | GLU | A | 496 | 0 | -6.448 | 54.984 | 3.025  | 1.00 | 63.68 |
|    | ATOM | 3791 | OE1 | GLU | A | 496 | 0 | -7.449 | 55.411 | 2.388  | 1.00 | 65.15 |
|    | ATOM | 3792 | OE2 | GLU | A | 496 | 0 | -5.747 | 54.034 | 2.586  | 1.00 | 64.91 |



|    |      |      |     |     |   |     |   |         |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|---------|--------|--------|------|-------|
|    | ATOM | 3831 | O   | THR | A | 502 | 0 | -11.199 | 41.604 | 6.074  | 1.00 | 58.71 |
|    | ATOM | 3832 | CB  | THR | A | 502 | 0 | -12.046 | 42.108 | 9.293  | 1.00 | 58.99 |
|    | ATOM | 3833 | OG1 | THR | A | 502 | 0 | -11.794 | 42.909 | 10.464 | 1.00 | 59.62 |
|    | ATOM | 3834 | CG2 | THR | A | 502 | 0 | -12.421 | 40.707 | 9.749  | 1.00 | 58.74 |
| 5  | ATOM | 3835 | N   | VAL | A | 503 | 0 | -10.746 | 39.922 | 7.471  | 1.00 | 59.20 |
|    | ATOM | 3836 | CA  | VAL | A | 503 | 0 | -10.904 | 38.877 | 6.468  | 1.00 | 60.27 |
|    | ATOM | 3837 | C   | VAL | A | 503 | 0 | -11.687 | 37.736 | 7.119  | 1.00 | 61.11 |
|    | ATOM | 3838 | O   | VAL | A | 503 | 0 | -11.606 | 37.563 | 8.341  | 1.00 | 61.03 |
|    | ATOM | 3839 | CB  | VAL | A | 503 | 0 | -9.589  | 38.430 | 5.823  | 1.00 | 59.97 |
| 10 | ATOM | 3840 | CG1 | VAL | A | 503 | 0 | -8.337  | 38.964 | 6.507  | 1.00 | 59.65 |
|    | ATOM | 3841 | CG2 | VAL | A | 503 | 0 | -9.467  | 36.914 | 5.722  | 1.00 | 59.97 |
|    | ATOM | 3842 | N   | VAL | A | 504 | 0 | -12.478 | 37.002 | 6.341  | 1.00 | 61.77 |
|    | ATOM | 3843 | CA  | VAL | A | 504 | 0 | -13.203 | 35.863 | 6.911  | 1.00 | 62.40 |
|    | ATOM | 3844 | C   | VAL | A | 504 | 0 | -12.673 | 34.579 | 6.259  | 1.00 | 62.99 |
| 15 | ATOM | 3845 | O   | VAL | A | 504 | 0 | -11.811 | 33.894 | 6.803  | 1.00 | 63.13 |
| 16 | ATOM | 3846 | CB  | VAL | A | 504 | 0 | -14.730 | 35.882 | 6.756  | 1.00 | 62.39 |
| 17 | ATOM | 3847 | CG1 | VAL | A | 504 | 0 | -15.392 | 36.931 | 7.635  | 1.00 | 61.89 |
| 18 | ATOM | 3848 | CG2 | VAL | A | 504 | 0 | -15.127 | 36.068 | 5.297  | 1.00 | 62.17 |
| 19 | ATOM | 3849 | C1  | NAG | A | 800 | 0 | -2.401  | 42.835 | 45.802 | 1.00 | 30.44 |
| 20 | ATOM | 3850 | C2  | NAG | A | 800 | 0 | -1.327  | 43.232 | 46.780 | 1.00 | 31.80 |
| 21 | ATOM | 3851 | N2  | NAG | A | 800 | 0 | -0.119  | 43.561 | 45.983 | 1.00 | 31.37 |
| 22 | ATOM | 3852 | C7  | NAG | A | 800 | 0 | 0.179   | 44.844 | 45.683 | 1.00 | 32.37 |
| 23 | ATOM | 3853 | O7  | NAG | A | 800 | 0 | -0.549  | 45.688 | 45.982 | 1.00 | 34.61 |
| 24 | ATOM | 3854 | C8  | NAG | A | 800 | 0 | 1.457   | 45.094 | 44.983 | 1.00 | 31.67 |
| 25 | ATOM | 3855 | C3  | NAG | A | 800 | 0 | -1.015  | 42.187 | 47.801 | 1.00 | 32.94 |
| 26 | ATOM | 3856 | O3  | NAG | A | 800 | 0 | -0.264  | 42.838 | 48.796 | 1.00 | 34.46 |
| 27 | ATOM | 3857 | C4  | NAG | A | 800 | 0 | -2.351  | 41.662 | 48.377 | 1.00 | 34.05 |
| 28 | ATOM | 3858 | O4  | NAG | A | 800 | 0 | -2.097  | 40.644 | 49.344 | 1.00 | 35.62 |
| 29 | ATOM | 3859 | C5  | NAG | A | 800 | 0 | -3.128  | 41.025 | 47.202 | 1.00 | 35.11 |
| 30 | ATOM | 3860 | O5  | NAG | A | 800 | 0 | -3.466  | 42.046 | 46.295 | 1.00 | 33.06 |
|    | ATOM | 3861 | C6  | NAG | A | 800 | 0 | -4.444  | 40.420 | 47.673 | 1.00 | 36.66 |
|    | ATOM | 3862 | O6  | NAG | A | 800 | 0 | -5.199  | 41.411 | 48.288 | 1.00 | 39.73 |
|    | ATOM | 3863 | C1  | GLC | A | 900 | 0 | -8.957  | 50.280 | 6.333  | 1.00 | 58.53 |
|    | ATOM | 3864 | C2  | GLC | A | 900 | 0 | -8.500  | 49.605 | 5.037  | 1.00 | 59.25 |
| 35 | ATOM | 3865 | C3  | GLC | A | 900 | 0 | -7.806  | 50.686 | 4.219  | 1.00 | 59.71 |
|    | ATOM | 3866 | C4  | GLC | A | 900 | 0 | -8.691  | 51.905 | 3.987  | 1.00 | 60.13 |
|    | ATOM | 3867 | C5  | GLC | A | 900 | 0 | -9.595  | 52.289 | 5.142  | 1.00 | 59.22 |
|    | ATOM | 3868 | O5  | GLC | A | 900 | 0 | -10.004 | 51.177 | 5.937  | 1.00 | 59.71 |

|    |      |      |     |     |   |    |   |        |        |        |      |       |
|----|------|------|-----|-----|---|----|---|--------|--------|--------|------|-------|
|    | ATOM | 3869 | CU  | IUM | B | 1  | 0 | -1.332 | 34.401 | 30.132 | 1.00 | 29.47 |
|    | ATOM | 3870 | CU  | IUM | B | 2  | 0 | 7.297  | 42.245 | 26.618 | 1.00 | 27.01 |
|    | ATOM | 3871 | CU  | IUM | B | 3  | 0 | 9.569  | 38.786 | 23.923 | 1.00 | 21.38 |
|    | ATOM | 3872 | O   | IUM | B | 5  | 0 | 7.445  | 40.703 | 25.162 | 1.00 | 26.99 |
| 5  | ATOM | 3873 | OW0 | WAT | W | 1  | 0 | 19.509 | 36.893 | 30.054 | 1.00 | 13.07 |
|    | ATOM | 3874 | OW0 | WAT | W | 2  | 0 | 24.726 | 29.672 | 16.651 | 1.00 | 7.67  |
|    | ATOM | 3875 | OW0 | WAT | W | 3  | 0 | 15.295 | 17.988 | 35.061 | 1.00 | 8.65  |
|    | ATOM | 3876 | OW0 | WAT | W | 4  | 0 | 6.481  | 28.311 | 23.427 | 1.00 | 8.00  |
|    | ATOM | 3877 | OW0 | WAT | W | 5  | 0 | 14.921 | 45.178 | 24.306 | 1.00 | 17.04 |
| 10 | ATOM | 3878 | OW0 | WAT | W | 6  | 0 | 14.413 | 44.401 | 28.162 | 1.00 | 10.12 |
|    | ATOM | 3879 | OW0 | WAT | W | 7  | 0 | 9.967  | 21.576 | 9.620  | 1.00 | 11.43 |
|    | ATOM | 3880 | OW0 | WAT | W | 8  | 0 | 10.088 | 28.675 | 13.038 | 1.00 | 9.27  |
|    | ATOM | 3881 | OW0 | WAT | W | 9  | 0 | 9.808  | 47.902 | 28.959 | 1.00 | 12.71 |
|    | ATOM | 3882 | OW0 | WAT | W | 10 | 0 | 21.976 | 23.052 | 35.604 | 1.00 | 11.72 |
|    | ATOM | 3883 | OW0 | WAT | W | 11 | 0 | 10.862 | 25.744 | 29.928 | 1.00 | 10.21 |
|    | ATOM | 3884 | OW0 | WAT | W | 12 | 0 | 26.087 | 32.996 | 23.097 | 1.00 | 14.21 |
|    | ATOM | 3885 | OW0 | WAT | W | 13 | 0 | 22.256 | 58.745 | 37.931 | 1.00 | 17.85 |
|    | ATOM | 3886 | OW0 | WAT | W | 14 | 0 | -0.104 | 29.831 | 35.249 | 1.00 | 16.36 |
|    | ATOM | 3887 | OW0 | WAT | W | 15 | 0 | 18.153 | 61.857 | 36.641 | 1.00 | 14.38 |
|    | ATOM | 3888 | OW0 | WAT | W | 16 | 0 | 9.426  | 38.431 | 9.161  | 1.00 | 15.35 |
|    | ATOM | 3889 | OW0 | WAT | W | 17 | 0 | 7.639  | 24.371 | 3.713  | 1.00 | 22.18 |
|    | ATOM | 3890 | OW0 | WAT | W | 18 | 0 | 27.977 | 11.643 | 9.481  | 1.00 | 19.22 |
|    | ATOM | 3891 | OW0 | WAT | W | 19 | 0 | 3.140  | 21.028 | 24.695 | 1.00 | 11.12 |
|    | ATOM | 3892 | OW0 | WAT | W | 20 | 0 | 9.847  | 20.701 | 30.902 | 1.00 | 16.16 |
|    | ATOM | 3893 | OW0 | WAT | W | 21 | 0 | -1.517 | 29.009 | 43.180 | 1.00 | 27.18 |
|    | ATOM | 3894 | OW0 | WAT | W | 22 | 0 | 3.497  | 29.138 | 26.088 | 1.00 | 17.22 |
|    | ATOM | 3895 | OW0 | WAT | W | 23 | 0 | 20.614 | 32.765 | 40.433 | 1.00 | 17.63 |
|    | ATOM | 3896 | OW0 | WAT | W | 24 | 0 | 19.098 | 51.778 | 39.452 | 1.00 | 22.33 |
|    | ATOM | 3897 | OW0 | WAT | W | 25 | 0 | 0.977  | 21.396 | 5.064  | 1.00 | 18.54 |
| 30 | ATOM | 3898 | OW0 | WAT | W | 26 | 0 | 8.546  | 16.150 | 21.761 | 1.00 | 16.40 |
|    | ATOM | 3899 | OW0 | WAT | W | 27 | 0 | 6.102  | 19.858 | 10.350 | 1.00 | 17.79 |
|    | ATOM | 3900 | OW0 | WAT | W | 28 | 0 | 11.702 | 55.189 | 41.955 | 1.00 | 18.92 |
|    | ATOM | 3901 | OW0 | WAT | W | 29 | 0 | 3.360  | 42.251 | 18.209 | 1.00 | 16.26 |
|    | ATOM | 3902 | OW0 | WAT | W | 30 | 0 | 6.232  | 14.672 | 22.473 | 1.00 | 24.49 |
| 35 | ATOM | 3903 | OW0 | WAT | W | 31 | 0 | 16.729 | 26.542 | 39.731 | 1.00 | 15.28 |
|    | ATOM | 3904 | OW0 | WAT | W | 32 | 0 | 2.834  | 30.640 | 40.601 | 1.00 | 18.11 |
|    | ATOM | 3905 | OW0 | WAT | W | 33 | 0 | 21.893 | 42.837 | 27.884 | 1.00 | 15.08 |
|    | ATOM | 3906 | OW0 | WAT | W | 34 | 0 | 1.581  | 28.193 | 27.914 | 1.00 | 17.77 |



|    |      |      |     |     |   |    |   |        |        |        |      |       |
|----|------|------|-----|-----|---|----|---|--------|--------|--------|------|-------|
|    | ATOM | 3907 | OW0 | WAT | W | 35 | 0 | -3.503 | 21.749 | 11.578 | 1.00 | 15.32 |
|    | ATOM | 3908 | OW0 | WAT | W | 36 | 0 | 7.131  | 33.344 | 11.786 | 1.00 | 18.18 |
|    | ATOM | 3909 | OW0 | WAT | W | 37 | 0 | 17.312 | 38.603 | 29.961 | 1.00 | 14.75 |
|    | ATOM | 3910 | OW0 | WAT | W | 38 | 0 | -6.705 | 40.723 | 39.909 | 1.00 | 23.49 |
| 5  | ATOM | 3911 | OW0 | WAT | W | 39 | 0 | 9.010  | 31.121 | 11.736 | 1.00 | 19.99 |
|    | ATOM | 3912 | OW0 | WAT | W | 40 | 0 | 9.376  | 28.353 | 33.076 | 1.00 | 16.22 |
|    | ATOM | 3913 | OW0 | WAT | W | 41 | 0 | 30.104 | 29.895 | 20.857 | 1.00 | 25.77 |
|    | ATOM | 3914 | OW0 | WAT | W | 42 | 0 | -6.950 | 33.663 | 21.335 | 1.00 | 26.62 |
|    | ATOM | 3915 | OW0 | WAT | W | 43 | 0 | 8.541  | 27.867 | 36.827 | 1.00 | 12.80 |
| 10 | ATOM | 3916 | OW0 | WAT | W | 44 | 0 | 3.590  | 21.651 | 11.893 | 1.00 | 14.46 |
|    | ATOM | 3917 | OW0 | WAT | W | 45 | 0 | 23.290 | 21.665 | 37.787 | 1.00 | 28.75 |
|    | ATOM | 3918 | OW0 | WAT | W | 46 | 0 | 22.724 | 11.873 | 22.270 | 1.00 | 23.07 |
|    | ATOM | 3919 | OW0 | WAT | W | 47 | 0 | -1.090 | 42.001 | 12.877 | 1.00 | 19.33 |
|    | ATOM | 3920 | OW0 | WAT | W | 48 | 0 | 14.091 | 27.298 | 40.583 | 1.00 | 18.51 |
| 15 | ATOM | 3921 | OW0 | WAT | W | 49 | 0 | 2.336  | 52.026 | 29.983 | 1.00 | 25.66 |
|    | ATOM | 3922 | OW0 | WAT | W | 50 | 0 | 15.475 | 14.450 | 22.853 | 1.00 | 20.37 |
|    | ATOM | 3923 | OW0 | WAT | W | 51 | 0 | 25.945 | 26.568 | 40.287 | 1.00 | 24.49 |
|    | ATOM | 3924 | OW0 | WAT | W | 52 | 0 | 19.545 | 41.598 | 35.087 | 1.00 | 20.70 |
|    | ATOM | 3925 | OW0 | WAT | W | 53 | 0 | -3.802 | 47.942 | 9.638  | 1.00 | 29.98 |
| 20 | ATOM | 3926 | OW0 | WAT | W | 54 | 0 | -7.478 | 41.160 | 9.585  | 1.00 | 24.26 |
|    | ATOM | 3927 | OW0 | WAT | W | 55 | 0 | -2.938 | 29.733 | 36.048 | 1.00 | 22.93 |
|    | ATOM | 3928 | OW0 | WAT | W | 56 | 0 | 29.051 | 32.114 | 22.680 | 1.00 | 22.50 |
|    | ATOM | 3929 | OW0 | WAT | W | 57 | 0 | 0.360  | 29.505 | 5.595  | 1.00 | 17.78 |
|    | ATOM | 3930 | OW0 | WAT | W | 58 | 0 | 8.583  | 57.422 | 21.440 | 1.00 | 21.90 |
| 25 | ATOM | 3931 | OW0 | WAT | W | 59 | 0 | 25.151 | 31.947 | 34.812 | 1.00 | 22.13 |
|    | ATOM | 3932 | OW0 | WAT | W | 60 | 0 | 25.133 | 62.204 | 32.968 | 1.00 | 25.75 |
|    | ATOM | 3933 | OW0 | WAT | W | 61 | 0 | 14.909 | 40.770 | 30.294 | 1.00 | 17.25 |
|    | ATOM | 3934 | OW0 | WAT | W | 62 | 0 | 20.825 | 30.520 | 34.676 | 1.00 | 16.18 |
|    | ATOM | 3935 | OW0 | WAT | W | 63 | 0 | 5.509  | 26.744 | 43.167 | 1.00 | 30.12 |
| 30 | ATOM | 3936 | OW0 | WAT | W | 64 | 0 | 5.280  | 57.279 | 14.627 | 1.00 | 22.66 |
|    | ATOM | 3937 | OW0 | WAT | W | 65 | 0 | 2.944  | 53.436 | 32.359 | 1.00 | 22.97 |
|    | ATOM | 3938 | OW0 | WAT | W | 66 | 0 | 11.266 | 43.508 | 3.407  | 1.00 | 20.01 |
|    | ATOM | 3939 | OW0 | WAT | W | 67 | 0 | 21.535 | 45.549 | 26.563 | 1.00 | 24.47 |
|    | ATOM | 3940 | OW0 | WAT | W | 68 | 0 | 0.412  | 33.358 | 11.837 | 1.00 | 19.89 |
| 35 | ATOM | 3941 | OW0 | WAT | W | 69 | 0 | 26.466 | 32.305 | 25.785 | 1.00 | 20.19 |
|    | ATOM | 3942 | OW0 | WAT | W | 70 | 0 | 0.910  | 45.068 | 7.829  | 1.00 | 22.05 |
|    | ATOM | 3943 | OW0 | WAT | W | 71 | 0 | -2.060 | 46.506 | 39.381 | 1.00 | 23.49 |
|    | ATOM | 3944 | OW0 | WAT | W | 72 | 0 | 20.236 | 56.718 | 25.851 | 1.00 | 23.74 |

|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 3945 | OW0 | WAT | W | 73  | 0 | 3.253  | 23.017 | 38.254 | 1.00 | 24.83 |
|    | ATOM | 3946 | OW0 | WAT | W | 74  | 0 | 9.653  | 22.835 | 35.143 | 1.00 | 25.79 |
|    | ATOM | 3947 | OW0 | WAT | W | 75  | 0 | 16.877 | 52.904 | 47.331 | 1.00 | 24.42 |
|    | ATOM | 3948 | OW0 | WAT | W | 76  | 0 | 14.293 | 22.021 | 3.993  | 1.00 | 32.28 |
| 5  | ATOM | 3949 | OW0 | WAT | W | 77  | 0 | -5.287 | 19.835 | 18.528 | 1.00 | 24.65 |
|    | ATOM | 3950 | OW0 | WAT | W | 78  | 0 | 8.414  | 38.317 | 49.069 | 1.00 | 28.77 |
|    | ATOM | 3951 | OW0 | WAT | W | 79  | 0 | 7.070  | 32.466 | 47.926 | 1.00 | 21.83 |
|    | ATOM | 3952 | OW0 | WAT | W | 80  | 0 | -0.452 | 28.307 | 25.779 | 1.00 | 16.58 |
|    | ATOM | 3953 | OW0 | WAT | W | 81  | 0 | 14.774 | 15.006 | 34.455 | 1.00 | 25.63 |
| 10 | ATOM | 3954 | OW0 | WAT | W | 82  | 0 | 11.515 | 54.942 | 35.962 | 1.00 | 14.20 |
|    | ATOM | 3955 | OW0 | WAT | W | 83  | 0 | 25.643 | 33.451 | 32.105 | 1.00 | 30.31 |
|    | ATOM | 3956 | OW0 | WAT | W | 84  | 0 | 11.869 | 12.221 | 20.394 | 1.00 | 31.37 |
|    | ATOM | 3957 | OW0 | WAT | W | 85  | 0 | 11.653 | 51.587 | 22.411 | 1.00 | 16.48 |
|    | ATOM | 3958 | OW0 | WAT | W | 86  | 0 | 17.334 | 40.837 | 51.079 | 1.00 | 30.26 |
| 15 | ATOM | 3959 | OW0 | WAT | W | 87  | 0 | 4.355  | 25.208 | 34.030 | 1.00 | 32.26 |
| 16 | ATOM | 3960 | OW0 | WAT | W | 88  | 0 | 18.816 | 52.360 | 32.512 | 1.00 | 21.19 |
| 17 | ATOM | 3961 | OW0 | WAT | W | 89  | 0 | -2.704 | 46.518 | 35.364 | 1.00 | 21.99 |
| 18 | ATOM | 3962 | OW0 | WAT | W | 90  | 0 | 18.793 | 27.893 | 49.481 | 1.00 | 24.52 |
| 19 | ATOM | 3963 | OW0 | WAT | W | 91  | 0 | 22.459 | 46.584 | 28.898 | 1.00 | 18.99 |
| 20 | ATOM | 3964 | OW0 | WAT | W | 92  | 0 | 7.958  | 34.422 | 49.370 | 1.00 | 26.14 |
| 21 | ATOM | 3965 | OW0 | WAT | W | 93  | 0 | 23.972 | 16.246 | 6.806  | 1.00 | 24.35 |
| 22 | ATOM | 3966 | OW0 | WAT | W | 94  | 0 | 1.340  | 49.185 | 26.307 | 1.00 | 31.64 |
| 23 | ATOM | 3967 | OW0 | WAT | W | 95  | 0 | -1.830 | 35.291 | 12.266 | 1.00 | 27.28 |
| 24 | ATOM | 3968 | OW0 | WAT | W | 96  | 0 | 20.460 | 17.486 | 3.589  | 1.00 | 33.51 |
| 25 | ATOM | 3969 | OW0 | WAT | W | 97  | 0 | 15.177 | 6.964  | 9.868  | 1.00 | 24.40 |
| 26 | ATOM | 3970 | OW0 | WAT | W | 98  | 0 | 18.616 | 57.927 | 43.922 | 1.00 | 30.76 |
| 27 | ATOM | 3971 | OW0 | WAT | W | 99  | 0 | 10.562 | 32.112 | 9.972  | 1.00 | 28.90 |
| 28 | ATOM | 3972 | OW0 | WAT | W | 100 | 0 | 1.630  | 61.363 | 10.878 | 1.00 | 33.92 |
| 29 | ATOM | 3973 | OW0 | WAT | W | 101 | 0 | -4.939 | 49.989 | 33.211 | 1.00 | 29.73 |
| 30 | ATOM | 3974 | OW0 | WAT | W | 102 | 0 | 19.385 | 44.813 | 34.546 | 1.00 | 23.52 |
| 31 | ATOM | 3975 | OW0 | WAT | W | 103 | 0 | 19.055 | 43.063 | 37.581 | 1.00 | 30.59 |
| 32 | ATOM | 3976 | OW0 | WAT | W | 105 | 0 | 28.703 | 33.555 | 27.406 | 1.00 | 32.92 |
| 33 | ATOM | 3977 | OW0 | WAT | W | 106 | 0 | 28.835 | 19.646 | 10.759 | 1.00 | 40.44 |
| 34 | ATOM | 3978 | OW0 | WAT | W | 107 | 0 | 22.047 | 22.465 | 9.758  | 1.00 | 29.98 |
| 35 | ATOM | 3979 | OW0 | WAT | W | 108 | 0 | 14.689 | 61.032 | 36.346 | 1.00 | 30.63 |
|    | ATOM | 3980 | OW0 | WAT | W | 109 | 0 | 16.998 | 24.042 | 9.318  | 1.00 | 23.90 |
|    | ATOM | 3981 | OW0 | WAT | W | 110 | 0 | 13.472 | 30.533 | 11.848 | 1.00 | 34.83 |
|    | ATOM | 3982 | OW0 | WAT | W | 111 | 0 | -2.175 | 35.601 | 41.496 | 1.00 | 28.55 |

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|    |      |      |     |     |   |     |   |         |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|---------|--------|--------|------|-------|
|    | ATOM | 3983 | OW0 | WAT | W | 112 | 0 | 1.528   | 17.373 | -1.396 | 1.00 | 38.21 |
|    | ATOM | 3984 | OW0 | WAT | W | 113 | 0 | -2.856  | 29.748 | 19.681 | 1.00 | 30.55 |
|    | ATOM | 3985 | OW0 | WAT | W | 114 | 0 | 2.377   | 42.810 | 47.971 | 1.00 | 26.87 |
|    | ATOM | 3986 | OW0 | WAT | W | 115 | 0 | 10.947  | 12.820 | 33.745 | 1.00 | 31.60 |
| 5  | ATOM | 3987 | OW0 | WAT | W | 116 | 0 | 9.807   | 58.194 | 12.442 | 1.00 | 29.63 |
|    | ATOM | 3988 | OW0 | WAT | W | 117 | 0 | 18.488  | 62.559 | 29.470 | 1.00 | 45.83 |
|    | ATOM | 3989 | OW0 | WAT | W | 118 | 0 | 11.708  | 61.566 | 40.940 | 1.00 | 37.19 |
|    | ATOM | 3990 | OW0 | WAT | W | 119 | 0 | -10.101 | 22.257 | 15.091 | 1.00 | 30.48 |
|    | ATOM | 3991 | OW0 | WAT | W | 120 | 0 | -1.930  | 15.913 | 7.386  | 1.00 | 36.63 |
| 10 | ATOM | 3992 | OW0 | WAT | W | 121 | 0 | 23.988  | 43.686 | 29.319 | 1.00 | 32.15 |
|    | ATOM | 3993 | OW0 | WAT | W | 122 | 0 | 7.354   | 57.153 | 12.809 | 1.00 | 28.10 |
|    | ATOM | 3994 | OW0 | WAT | W | 123 | 0 | 24.207  | 22.101 | 11.958 | 1.00 | 32.83 |
|    | ATOM | 3995 | OW0 | WAT | W | 124 | 0 | -1.268  | 15.083 | 9.738  | 1.00 | 32.53 |
|    | ATOM | 3996 | OW0 | WAT | W | 125 | 0 | 19.363  | 5.047  | 13.812 | 1.00 | 34.57 |
|    | ATOM | 3997 | OW0 | WAT | W | 126 | 0 | 4.799   | 41.145 | 23.688 | 1.00 | 28.33 |
|    | ATOM | 3998 | OW0 | WAT | W | 127 | 0 | 15.975  | 23.287 | 5.889  | 1.00 | 30.95 |
|    | ATOM | 3999 | OW0 | WAT | W | 128 | 0 | 3.698   | 38.582 | -2.369 | 1.00 | 36.84 |
|    | ATOM | 4000 | OW0 | WAT | W | 129 | 0 | -2.601  | 49.124 | 11.710 | 1.00 | 28.91 |
|    | ATOM | 4001 | OW0 | WAT | W | 130 | 0 | 15.779  | 56.598 | 43.285 | 1.00 | 27.76 |
| 20 | ATOM | 4002 | OW0 | WAT | W | 131 | 0 | 26.306  | 32.724 | 13.233 | 1.00 | 37.94 |
|    | ATOM | 4003 | OW0 | WAT | W | 132 | 0 | 3.610   | 46.947 | 23.991 | 1.00 | 35.49 |
|    | ATOM | 4004 | OW0 | WAT | W | 133 | 0 | 18.354  | 11.929 | 29.348 | 1.00 | 33.88 |
|    | ATOM | 4005 | OW0 | WAT | W | 134 | 0 | 13.966  | 41.517 | 27.765 | 1.00 | 18.02 |
|    | ATOM | 4006 | OW0 | WAT | W | 135 | 0 | 23.545  | 49.080 | 27.785 | 1.00 | 25.21 |
|    | ATOM | 4007 | OW0 | WAT | W | 136 | 0 | 16.876  | 25.082 | 41.791 | 1.00 | 28.71 |
|    | ATOM | 4008 | OW0 | WAT | W | 137 | 0 | 15.439  | 54.809 | 45.527 | 1.00 | 35.30 |
|    | ATOM | 4009 | OW0 | WAT | W | 138 | 0 | 11.733  | 25.676 | 43.264 | 1.00 | 38.24 |
|    | ATOM | 4010 | OW0 | WAT | W | 139 | 0 | 9.795   | 34.460 | 11.898 | 1.00 | 31.61 |
|    | ATOM | 4011 | OW0 | WAT | W | 140 | 0 | 13.328  | 57.569 | 42.356 | 1.00 | 30.66 |
| 30 | ATOM | 4012 | OW0 | WAT | W | 141 | 0 | 14.146  | 7.869  | 20.604 | 1.00 | 35.72 |
|    | ATOM | 4013 | OW0 | WAT | W | 142 | 0 | 23.330  | 12.948 | 3.922  | 1.00 | 29.83 |
|    | ATOM | 4014 | OW0 | WAT | W | 143 | 0 | 16.607  | 10.575 | 24.347 | 1.00 | 36.47 |
|    | ATOM | 4015 | OW0 | WAT | W | 144 | 0 | 8.509   | 25.546 | 35.012 | 1.00 | 35.43 |
|    | ATOM | 4016 | OW0 | WAT | W | 145 | 0 | 12.597  | 44.457 | 1.450  | 1.00 | 39.54 |
| 35 | ATOM | 4017 | OW0 | WAT | W | 146 | 0 | 21.680  | 51.509 | 39.154 | 1.00 | 40.08 |
|    | ATOM | 4018 | OW0 | WAT | W | 147 | 0 | -0.702  | 52.593 | 39.700 | 1.00 | 29.62 |
|    | ATOM | 4019 | OW0 | WAT | W | 148 | 0 | 23.269  | 14.719 | 22.589 | 1.00 | 30.24 |
|    | ATOM | 4020 | OW0 | WAT | W | 149 | 0 | 27.149  | 22.972 | 41.846 | 1.00 | 35.00 |

15 986937 20 " 070601 25  
 ATOM 4021 OW0 WAT W 150 0 2.854 9.792 8.923 1.00 46.35  
 ATOM 4022 OW0 WAT W 151 0 24.831 15.672 24.889 1.00 29.22  
 ATOM 4023 OW0 WAT W 152 0 24.965 51.606 19.113 1.00 32.19  
 ATOM 4024 OW0 WAT W 153 0 -4.611 25.034 37.817 1.00 46.51  
 5 ATOM 4025 OW0 WAT W 154 0 12.225 39.382 28.864 1.00 25.42  
 ATOM 4026 OW0 WAT W 155 0 18.332 22.341 43.180 1.00 36.18  
 ATOM 4027 OW0 WAT W 156 0 36.467 20.701 17.144 1.00 44.13  
 ATOM 4028 OW0 WAT W 157 0 -4.903 47.901 40.886 1.00 33.97  
 ATOM 4029 OW0 WAT W 158 0 12.979 13.955 3.208 1.00 33.60  
 10 ATOM 4030 OW0 WAT W 159 0 32.383 12.693 24.743 1.00 30.25  
 ATOM 4031 OW0 WAT W 160 0 30.796 26.296 14.368 1.00 44.37  
 ATOM 4032 OW0 WAT W 161 0 19.332 37.280 40.057 1.00 31.54  
 ATOM 4033 OW0 WAT W 162 0 17.625 20.028 41.642 1.00 45.88  
 ATOM 4034 OW0 WAT W 163 0 19.917 56.115 46.103 1.00 40.37  
 15 ATOM 4035 OW0 WAT W 164 0 -4.743 14.204 16.748 1.00 40.86  
 ATOM 4036 OW0 WAT W 165 0 0.738 46.912 21.790 1.00 38.56  
 ATOM 4037 OW0 WAT W 166 0 22.648 62.277 30.976 1.00 24.37  
 ATOM 4038 OW0 WAT W 167 0 -4.322 45.754 26.894 1.00 48.97  
 ATOM 4039 OW0 WAT W 168 0 -2.386 24.601 0.665 1.00 32.57  
 20 ATOM 4040 OW0 WAT W 169 0 -0.459 41.618 35.838 1.00 35.25  
 ATOM 4041 OW0 WAT W 170 0 26.659 4.722 11.434 1.00 41.25  
 ATOM 4042 OW0 WAT W 171 0 13.720 11.379 22.121 1.00 39.59  
 ATOM 4043 OW0 WAT W 172 0 15.266 7.451 6.576 1.00 41.71  
 ATOM 4044 OW0 WAT W 173 0 0.134 17.450 6.165 1.00 42.12  
 25 ATOM 4045 OW0 WAT W 174 0 38.646 32.884 25.247 1.00 41.80  
 ATOM 4046 OW0 WAT W 175 0 10.591 17.398 3.251 1.00 29.37  
 ATOM 4047 OW0 WAT W 176 0 22.444 49.424 25.264 1.00 19.51  
 ATOM 4048 OW0 WAT W 177 0 0.429 23.224 28.598 1.00 33.54  
 ATOM 4049 OW0 WAT W 178 0 -2.302 27.278 34.780 1.00 44.76  
 30 ATOM 4050 OW0 WAT W 179 0 2.054 25.866 16.462 1.00 34.29  
 ATOM 4051 OW0 WAT W 180 0 30.277 18.006 25.789 1.00 42.28  
 ATOM 4052 OW0 WAT W 181 0 2.316 18.424 27.884 1.00 47.39  
 ATOM 4053 OW0 WAT W 182 0 19.401 41.164 39.560 1.00 39.68  
 ATOM 4054 OW0 WAT W 183 0 23.742 10.982 24.879 1.00 43.32  
 35 ATOM 4055 OW0 WAT W 184 0 3.926 24.450 44.251 1.00 48.95  
 ATOM 4056 OW0 WAT W 185 0 25.186 21.211 40.951 1.00 39.05  
 ATOM 4057 OW0 WAT W 186 0 20.353 34.816 48.799 1.00 34.08  
 ATOM 4058 OW0 WAT W 187 0 35.782 22.476 21.693 1.00 40.04

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|    |      |      |     |     |   |     |   |         |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|---------|--------|--------|------|-------|
|    | ATOM | 4059 | OW0 | WAT | W | 188 | 0 | 27.256  | 23.617 | 12.235 | 1.00 | 40.85 |
|    | ATOM | 4060 | OW0 | WAT | W | 189 | 0 | 6.777   | 12.502 | 12.641 | 1.00 | 53.37 |
|    | ATOM | 4061 | OW0 | WAT | W | 190 | 0 | -4.663  | 38.998 | 4.159  | 1.00 | 39.85 |
|    | ATOM | 4062 | OW0 | WAT | W | 191 | 0 | 24.398  | 52.064 | 24.607 | 1.00 | 45.51 |
| 5  | ATOM | 4063 | OW0 | WAT | W | 192 | 0 | 1.808   | 15.541 | 4.832  | 1.00 | 41.06 |
|    | ATOM | 4064 | OW0 | WAT | W | 193 | 0 | 5.341   | 36.359 | 7.569  | 1.00 | 39.36 |
|    | ATOM | 4065 | OW0 | WAT | W | 194 | 0 | 32.192  | 38.650 | 21.799 | 1.00 | 37.18 |
|    | ATOM | 4066 | OW0 | WAT | W | 195 | 0 | -10.782 | 36.616 | 38.705 | 1.00 | 50.35 |
|    | ATOM | 4067 | OW0 | WAT | W | 196 | 0 | 4.119   | 64.116 | 32.946 | 1.00 | 34.51 |
| 10 | ATOM | 4068 | OW0 | WAT | W | 197 | 0 | 19.427  | 22.772 | 5.898  | 1.00 | 37.94 |
|    | ATOM | 4069 | OW0 | WAT | W | 198 | 0 | -4.671  | 33.476 | 1.652  | 1.00 | 43.38 |
|    | ATOM | 4070 | OW0 | WAT | W | 199 | 0 | -8.983  | 23.757 | 17.693 | 1.00 | 57.10 |
|    | ATOM | 4071 | OW0 | WAT | W | 200 | 0 | -6.735  | 22.473 | 20.432 | 1.00 | 38.49 |
|    | ATOM | 4072 | OW0 | WAT | W | 201 | 0 | -6.954  | 26.746 | 37.309 | 1.00 | 55.48 |
|    | ATOM | 4073 | OW0 | WAT | W | 202 | 0 | 23.418  | 38.662 | 33.700 | 1.00 | 42.20 |
|    | ATOM | 4074 | OW0 | WAT | W | 203 | 0 | 9.004   | 24.070 | 36.971 | 1.00 | 40.06 |
|    | ATOM | 4075 | OW0 | WAT | W | 204 | 0 | 18.890  | 42.920 | 51.502 | 1.00 | 46.29 |
|    | ATOM | 4076 | OW0 | WAT | W | 205 | 0 | 13.301  | 18.514 | 3.624  | 1.00 | 42.17 |
|    | ATOM | 4077 | OW0 | WAT | W | 206 | 0 | 31.189  | 12.995 | 19.645 | 1.00 | 51.92 |
| 20 | ATOM | 4078 | OW0 | WAT | W | 207 | 0 | 15.589  | 57.456 | 13.738 | 1.00 | 38.96 |
|    | ATOM | 4079 | OW0 | WAT | W | 208 | 0 | -3.389  | 12.961 | 12.738 | 1.00 | 46.99 |
|    | ATOM | 4080 | OW0 | WAT | W | 209 | 0 | 9.321   | 30.475 | 6.320  | 1.00 | 49.75 |
|    | ATOM | 4081 | OW0 | WAT | W | 210 | 0 | 1.680   | 61.379 | 33.738 | 1.00 | 37.48 |
|    | ATOM | 4082 | OW0 | WAT | W | 211 | 0 | -3.811  | 36.417 | 3.807  | 1.00 | 46.01 |
| 25 | ATOM | 4083 | OW0 | WAT | W | 212 | 0 | 17.087  | 46.902 | 3.830  | 1.00 | 45.12 |
|    | ATOM | 4084 | OW0 | WAT | W | 213 | 0 | 23.702  | 22.325 | 43.022 | 1.00 | 36.14 |
|    | ATOM | 4085 | OW0 | WAT | W | 214 | 0 | 10.849  | 60.003 | 14.389 | 1.00 | 32.05 |
|    | ATOM | 4086 | OW0 | WAT | W | 215 | 0 | 34.001  | 25.493 | 20.855 | 1.00 | 40.75 |
|    | ATOM | 4087 | OW0 | WAT | W | 216 | 0 | 27.422  | 37.093 | 28.951 | 1.00 | 42.33 |
| 30 | ATOM | 4088 | OW0 | WAT | W | 217 | 0 | 2.471   | 63.256 | 35.173 | 1.00 | 48.36 |
|    | ATOM | 4089 | OW0 | WAT | W | 218 | 0 | -0.973  | 59.086 | 28.720 | 1.00 | 53.14 |
|    | ATOM | 4090 | OW0 | WAT | W | 219 | 0 | 28.841  | 9.287  | 6.463  | 1.00 | 39.02 |
|    | ATOM | 4091 | OW0 | WAT | W | 220 | 0 | -5.593  | 21.802 | 9.619  | 1.00 | 44.21 |
|    | ATOM | 4092 | OW0 | WAT | W | 221 | 0 | 22.109  | 15.521 | 1.696  | 1.00 | 38.33 |
| 35 | ATOM | 4093 | OW0 | WAT | W | 222 | 0 | 13.029  | 32.860 | 12.233 | 1.00 | 37.63 |
|    | ATOM | 4094 | OW0 | WAT | W | 223 | 0 | 11.840  | 33.823 | 3.800  | 1.00 | 42.20 |
|    | ATOM | 4095 | OW0 | WAT | W | 224 | 0 | 8.476   | 42.976 | -0.104 | 1.00 | 40.23 |
|    | ATOM | 4096 | OW0 | WAT | W | 225 | 0 | 6.607   | 9.754  | 13.906 | 1.00 | 41.30 |

|    |      |      |     |     |   |     |   |        |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|--------|--------|--------|------|-------|
|    | ATOM | 4097 | OW0 | WAT | W | 226 | 0 | 22.513 | 32.613 | 49.067 | 1.00 | 47.26 |
|    | ATOM | 4098 | OW0 | WAT | W | 227 | 0 | 13.790 | 4.924  | 16.718 | 1.00 | 38.05 |
|    | ATOM | 4099 | OW0 | WAT | W | 228 | 0 | 4.578  | 46.381 | 2.146  | 1.00 | 38.90 |
|    | ATOM | 4100 | OW0 | WAT | W | 229 | 0 | -0.178 | 18.054 | 23.533 | 1.00 | 43.42 |
| 5  | ATOM | 4101 | OW0 | WAT | W | 230 | 0 | -5.146 | 34.010 | 4.766  | 1.00 | 38.90 |
|    | ATOM | 4102 | OW0 | WAT | W | 231 | 0 | 20.232 | 28.890 | 51.507 | 1.00 | 44.95 |
|    | ATOM | 4103 | OW0 | WAT | W | 232 | 0 | 16.083 | 32.879 | 10.309 | 1.00 | 45.29 |
|    | ATOM | 4104 | OW0 | WAT | W | 233 | 0 | 22.111 | 51.333 | 10.599 | 1.00 | 34.03 |
|    | ATOM | 4105 | OW0 | WAT | W | 234 | 0 | 3.247  | 15.790 | 28.046 | 1.00 | 50.25 |
| 10 | ATOM | 4106 | OW0 | WAT | W | 235 | 0 | 5.547  | 11.598 | 9.674  | 1.00 | 56.39 |
|    | ATOM | 4107 | OW0 | WAT | W | 236 | 0 | -1.085 | 18.297 | -2.265 | 1.00 | 45.26 |
|    | ATOM | 4108 | OW0 | WAT | W | 237 | 0 | 30.994 | 12.013 | 22.690 | 1.00 | 50.37 |
|    | ATOM | 4109 | OW0 | WAT | W | 238 | 0 | 24.691 | 33.260 | 27.819 | 1.00 | 37.65 |
|    | ATOM | 4110 | OW0 | WAT | W | 239 | 0 | 18.911 | 40.770 | 5.815  | 1.00 | 44.15 |
| 15 | ATOM | 4111 | OW0 | WAT | W | 240 | 0 | 21.532 | 53.033 | 33.280 | 1.00 | 31.23 |
|    | ATOM | 4112 | OW0 | WAT | W | 241 | 0 | 19.745 | 46.029 | 4.364  | 1.00 | 46.38 |
|    | ATOM | 4113 | OW0 | WAT | W | 242 | 0 | 27.516 | 16.526 | 25.474 | 1.00 | 51.75 |
|    | ATOM | 4114 | OW0 | WAT | W | 243 | 0 | 34.171 | 19.604 | 8.423  | 1.00 | 55.79 |
|    | ATOM | 4115 | OW0 | WAT | W | 244 | 0 | 23.870 | 53.512 | 11.474 | 1.00 | 42.01 |
| 20 | ATOM | 4116 | OW0 | WAT | W | 245 | 0 | 14.492 | 23.842 | 44.882 | 1.00 | 52.25 |
|    | ATOM | 4117 | OW0 | WAT | W | 246 | 0 | -3.070 | 63.260 | 33.189 | 1.00 | 40.77 |
|    | ATOM | 4118 | OW0 | WAT | W | 247 | 0 | 22.185 | 55.701 | 37.353 | 1.00 | 39.52 |
|    | ATOM | 4119 | OW0 | WAT | W | 248 | 0 | 14.144 | 26.239 | 42.825 | 1.00 | 42.50 |
|    | ATOM | 4120 | OW0 | WAT | W | 249 | 0 | 25.026 | 36.545 | 35.213 | 1.00 | 58.19 |
| 25 | ATOM | 4121 | OW0 | WAT | W | 250 | 0 | 27.072 | 34.293 | 43.895 | 1.00 | 46.58 |
|    | ATOM | 4122 | OW0 | WAT | W | 251 | 0 | 11.742 | 7.192  | 4.856  | 1.00 | 42.78 |
|    | ATOM | 4123 | OW0 | WAT | W | 252 | 0 | 0.730  | 46.405 | 24.947 | 1.00 | 39.31 |
|    | ATOM | 4124 | OW0 | WAT | W | 253 | 0 | 28.346 | 34.036 | 30.808 | 1.00 | 43.10 |
|    | ATOM | 4125 | OW0 | WAT | W | 254 | 0 | -3.838 | 40.281 | 1.903  | 1.00 | 38.67 |
| 30 | ATOM | 4126 | OW0 | WAT | W | 255 | 0 | 6.837  | 35.163 | 51.935 | 1.00 | 58.57 |
|    | ATOM | 4127 | OW0 | WAT | W | 256 | 0 | 19.740 | 62.853 | 17.880 | 1.00 | 52.39 |
|    | ATOM | 4128 | OW0 | WAT | W | 258 | 0 | -0.994 | 41.755 | 22.088 | 0.00 | 69.57 |
|    | ATOM | 4129 | OW0 | WAT | W | 259 | 0 | 1.221  | 10.473 | 15.458 | 1.00 | 54.80 |
|    | ATOM | 4130 | OW0 | WAT | W | 260 | 0 | 23.445 | 55.367 | 31.430 | 1.00 | 48.90 |
| 35 | ATOM | 4131 | OW0 | WAT | W | 261 | 0 | 23.757 | 57.854 | 34.657 | 1.00 | 37.69 |
|    | ATOM | 4132 | OW0 | WAT | W | 262 | 0 | 8.508  | 19.111 | 34.572 | 1.00 | 55.52 |
|    | ATOM | 4133 | OW0 | WAT | W | 263 | 0 | 22.806 | 22.381 | 3.611  | 1.00 | 64.20 |
|    | ATOM | 4134 | OW0 | WAT | W | 264 | 0 | 0.398  | 22.602 | 42.625 | 1.00 | 58.86 |

|    |      |      |     |     |   |     |   |         |        |        |      |       |
|----|------|------|-----|-----|---|-----|---|---------|--------|--------|------|-------|
| 5  | ATOM | 4135 | OW0 | WAT | W | 265 | 0 | 4.195   | 52.287 | 43.465 | 1.00 | 36.84 |
|    | ATOM | 4136 | OW0 | WAT | W | 266 | 0 | 20.211  | 6.536  | 4.911  | 1.00 | 39.34 |
|    | ATOM | 4137 | OW0 | WAT | W | 267 | 0 | 14.680  | 16.117 | 2.803  | 1.00 | 45.76 |
|    | ATOM | 4138 | OW0 | WAT | W | 268 | 0 | 14.938  | 25.582 | 6.850  | 1.00 | 41.01 |
|    | ATOM | 4139 | OW0 | WAT | W | 269 | 0 | 7.763   | 7.940  | 31.891 | 0.00 | 71.30 |
| 10 | ATOM | 4140 | OW0 | WAT | W | 270 | 0 | -3.459  | 33.491 | 39.400 | 1.00 | 40.80 |
|    | ATOM | 4141 | OW0 | WAT | W | 271 | 0 | 23.154  | 22.897 | 6.985  | 1.00 | 48.25 |
|    | ATOM | 4142 | OW0 | WAT | W | 272 | 0 | 34.916  | 25.555 | 28.092 | 1.00 | 52.63 |
|    | ATOM | 4143 | OW0 | WAT | W | 273 | 0 | 8.332   | 45.481 | 50.776 | 1.00 | 47.23 |
|    | ATOM | 4144 | OW0 | WAT | W | 274 | 0 | -3.441  | 57.643 | 28.775 | 1.00 | 49.70 |
| 15 | ATOM | 4145 | OW0 | WAT | W | 275 | 0 | 23.213  | 40.573 | 47.561 | 1.00 | 56.02 |
|    | ATOM | 4146 | OW0 | WAT | W | 276 | 0 | 5.421   | 55.179 | 45.172 | 1.00 | 52.70 |
|    | ATOM | 4147 | OW0 | WAT | W | 277 | 0 | -3.012  | 21.908 | 40.933 | 1.00 | 41.69 |
|    | ATOM | 4148 | OW0 | WAT | W | 278 | 0 | 26.328  | 53.637 | 17.905 | 1.00 | 37.80 |
|    | ATOM | 4149 | OW0 | WAT | W | 279 | 0 | 9.740   | 58.922 | 43.485 | 1.00 | 52.06 |
| 20 | ATOM | 4150 | OW0 | WAT | W | 280 | 0 | 23.545  | 15.660 | 4.258  | 1.00 | 41.55 |
|    | ATOM | 4151 | OW0 | WAT | W | 281 | 0 | 22.652  | 31.154 | 51.246 | 1.00 | 58.65 |
|    | ATOM | 4152 | OW0 | WAT | W | 282 | 0 | 22.192  | 51.135 | 8.251  | 1.00 | 44.76 |
|    | ATOM | 4153 | OW0 | WAT | W | 283 | 0 | -6.046  | 22.886 | 24.288 | 1.00 | 52.40 |
|    | ATOM | 4154 | OW0 | WAT | W | 284 | 0 | 19.949  | 45.276 | 49.516 | 1.00 | 54.58 |
| 25 | ATOM | 4155 | OW0 | WAT | W | 285 | 0 | 7.388   | 22.308 | 32.108 | 1.00 | 43.62 |
|    | ATOM | 4156 | OW0 | WAT | W | 286 | 0 | 15.080  | 50.452 | 2.795  | 1.00 | 52.20 |
|    | ATOM | 4157 | OW0 | WAT | W | 287 | 0 | 1.016   | 62.235 | 30.878 | 1.00 | 56.81 |
|    | ATOM | 4158 | OW0 | WAT | W | 288 | 0 | 23.803  | 52.570 | 27.699 | 1.00 | 56.22 |
|    | ATOM | 4159 | OW0 | WAT | W | 289 | 0 | -10.525 | 31.623 | 13.870 | 1.00 | 47.21 |
| 30 | ATOM | 4160 | OW0 | WAT | W | 290 | 0 | 1.599   | 55.502 | 24.567 | 1.00 | 44.50 |
|    | ATOM | 4161 | OW0 | WAT | W | 291 | 0 | -15.671 | 37.251 | 14.660 | 1.00 | 83.62 |
|    | ATOM | 4162 | OW0 | WAT | W | 292 | 0 | 7.231   | 7.950  | 17.754 | 1.00 | 50.61 |
|    | ATOM | 4163 | OW0 | WAT | W | 293 | 0 | -4.009  | 34.057 | 42.492 | 1.00 | 78.48 |
|    | ATOM | 4164 | OW0 | WAT | W | 294 | 0 | 21.004  | 58.371 | 18.690 | 1.00 | 61.15 |
| 35 | ATOM | 4165 | OW0 | WAT | W | 295 | 0 | 16.405  | 48.869 | 52.211 | 1.00 | 53.17 |
|    | ATOM | 4166 | OW0 | WAT | W | 296 | 0 | 7.329   | 31.202 | 1.964  | 1.00 | 38.86 |
|    | ATOM | 4167 | OW0 | WAT | W | 297 | 0 | 9.518   | 53.886 | 5.467  | 1.00 | 41.62 |
|    | ATOM | 4168 | OW0 | WAT | W | 298 | 0 | 10.398  | 48.995 | 0.335  | 1.00 | 49.64 |
|    | ATOM | 4169 | OW0 | WAT | W | 299 | 0 | 9.889   | 15.077 | 3.774  | 1.00 | 42.28 |
|    | ATOM | 4170 | OW0 | WAT | W | 300 | 0 | 15.854  | 56.731 | 10.934 | 1.00 | 44.02 |